

“A national resource of primary importance:”
Transforming Ireland’s peatlands in the
twentieth century.

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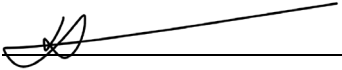
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Abstract

This research is concerned with the industrialisation of peat extraction in Ireland in the twentieth century and the subsequent contributions of this national resource to changing modes of energy conversion and utilisation in the modernising Irish state.

The Irish peat industry was established in the 1930s to contribute to the government's wider objectives of national and regional development. Peat was framed as a national resource and a means through which to establish energy independence. This industry grew throughout the twentieth century, eventually contributing to the large-scale transformation of communities and ecosystems at the sites of extraction, as well as establishing pathways for increased fossil energy consumption in Ireland. This research questions the beliefs and assumptions underpinning the state's decision to place peat at the centre of Irish state-building policies and considers the influences and experiences of non-governmental actors and more-than-human agencies in shaping the peat energy system.

This thesis develops an environmental history of the peat energy regime, from its origins in imperial resource-making discourses, to its resistance by ecologists and conservationists in the 1980s. Within this timeframe, peatlands were entirely remade as sites of industrial extraction, the materiality of peat was transformed into electricity, and the domestic consumption of peat became increasingly detached from its extractive origins. In tracing the discourses and material realities surrounding the changing peat energy system in Ireland, this thesis bridges the gap between cultural resource imaginaries and the realities of human-nature entanglements at the sites of extraction and consumption.

Rather than developing a narrative of decline, this thesis demonstrates that ecological decline was in fact part of a wider history of state-building, community and identity formation, and new living standards for Irish people. For this reason, the socio-cultural attachments to peat energy are shown to be deeply rooted. Furthermore, in considering the emergence of a peatland conservation paradigm, this research identifies that the interdependencies between industry,

ecology, and agriculture situated emergent peatland management principles within entrenched economic objectives.

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List of Abbreviations

AFF	An Foras Forbartha
AFT	An Foras Talúntais
BNM	Bord na Móna
CNG	Cumann na nGaedheal
INDC	Department of Industry and Commerce
DSPIP	Dutch Society for the Preservation of Irish Peatlands
EEC	European Economic Community
ESB	Electricity Supply Board
EU	European Union
FF	Fianna Fáil
FG	Fine Gael
FRB	Great Britain Fuel Research Board
IAOS	Irish Agricultural Organisation Society
IBP	International Biosphere Programme
ICA	Irish Countrywomen's Association
IHA	Irish Housewives' Association
IPCC	Irish Peatlands Conservation Council
IUCN	International Union for Conservation of Nature
NAI	National Archives, Ireland
NFC	National Folklore Collection
NLI	National Library of Ireland
NPWS	National Parks and Wildlife Service
RDS	Royal Dublin Society
RES	Rural Electrification Scheme
RIA	Royal Irish Academy
RTÉ	Raidió Teilifís Éireann
TCD	Trinity College, Dublin
TD	Teachta Dála
TDB	Turf Development Board
TG4	Teilifís na Gaeilge
UCD	University College, Dublin
UCG	University College, Galway
UNEP	United Nations Environmental Programme

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Introduction

In Ireland, peatlands have always had a value for the people living adjacent to them. Communities used peatlands for grazing livestock, foraging plants, spiritual and customary practices, as well as fuel extraction. These relationships were largely based on subsistence needs. Despite these indigenous connections to peatlands, as landscapes within the British Empire, they were considered wilderness and wastelands by colonial elites. In the twentieth century, the frameworks which governed human and peatland interactions were entirely transformed. For actors within the government of Ireland, peat became a national resource. And so, through the introduction of fossil fuel-powered machinery, energy infrastructure, and increased human labour, Ireland's peatlands transformed into industrial landscapes. While peat extraction was regionally specific, infrastructure networks transmitted new forms of peat energy throughout the country, expanding Ireland's fossil energy economy.

Today, the ecological consequences of this extraction and consumption frame new relationships between people and peatlands. This thesis is situated at the intersection of energy history, environmental history, social history and political history. It is a history of "a landscape that remembered everything that happened in and to it," as the Irish writer Seamus Heaney claimed.¹ It centres peatlands as sites of political, economic, social, cultural, and ecological transformation in the twentieth century.

¹ Seamus Heaney, "Feeling into Words." *Preoccupations: Selected Prose 1968-78* (London: Faber & Faber, 1980), 54.

I. Peatlands – between scientific and experiential knowledges

Peatlands are wetland ecosystems. They are formed through the accumulation of organic materials in hydrous conditions. These materials decompose slowly over time and become peat.² Peatlands cover approximately 3% of the earth's surface.³ In Ireland, peatlands cover almost 21% of the land's surface.⁴

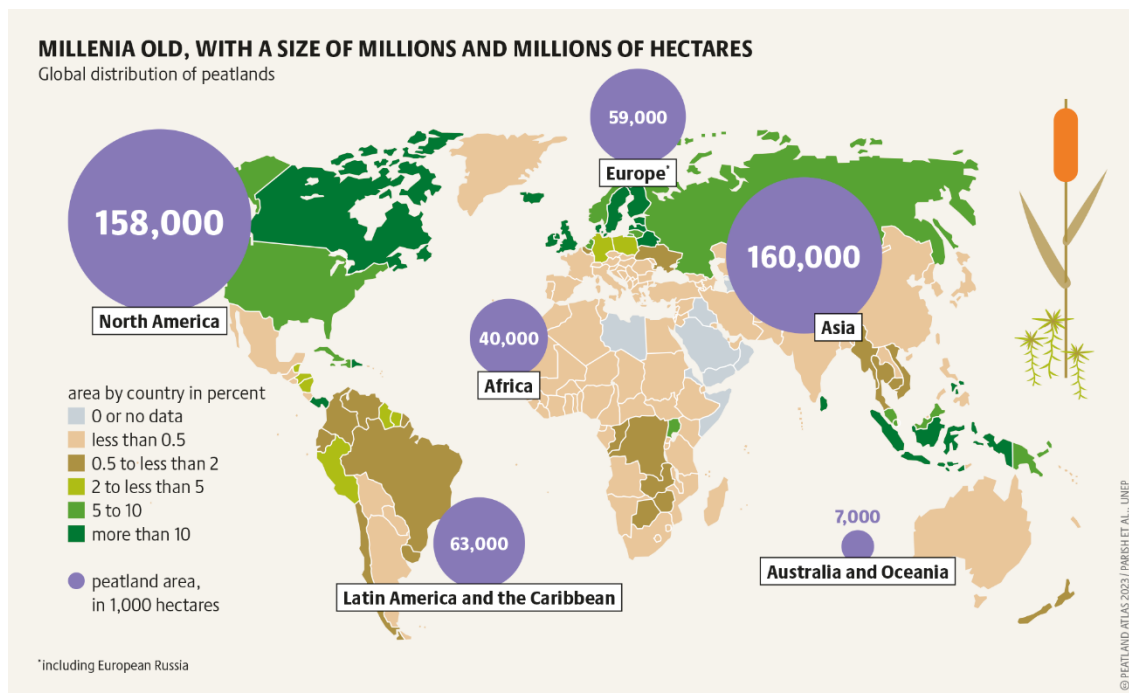


Figure I.1 Global distribution of peatlands, *Peatland Atlas 2023*, Heinrich-Böll-Stiftung & others.

² Maria Strack, ed., *Peatlands and Climate Change: Scientific Facts and Figures for Decision-Makers*, 2nd edition (Jyväskylä: International Peatland Society, 2023), 16 – 17.

³ Strack, *Peatlands and Climate Change*, 11; See figure I.1. courtesy of “Peatland Atlas 2023, Heinrich-Böll-Stiftung & others,” 15.

⁴ Wahaj Habib and John Connolly, “A National-scale Assessment of Land Use Change in Peatlands between 1989 and 2020 Using Landsat Data and Google Earth Engine—a Case Study of Ireland,” *Regional Environmental Change* 23, no. 124 (2023), 1.

There are three primary types of peatlands in Ireland. Fens, raised bogs, and blanket bogs.⁵ Fen formation began approximately 10,000 years ago, following the last ice age. Concave shallow lakes were made in the ground's surface by glaciers which, following glacial thaw, began to accumulate decomposed plant materials such as reeds, rushes, and sedges. In these shallow lakes, the slow decomposition of the plant materials was the result of the limited oxygen beneath the water's surface. Fens are distinguished from other Irish peatland types by their minerotrophic hydrology. This means that the hydrology of the wetland is composed of mineral rich groundwater.

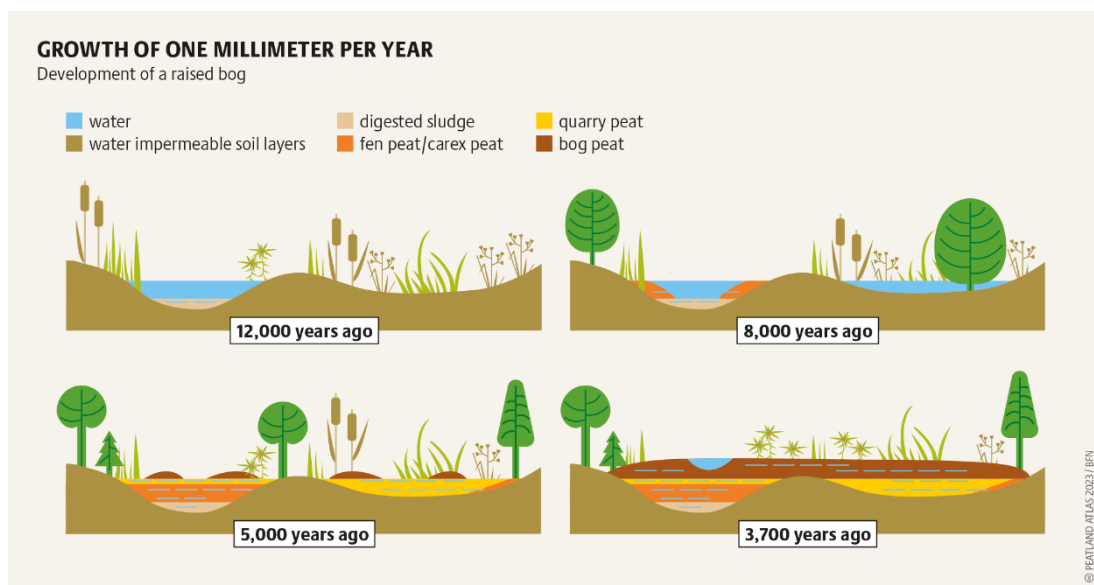


Figure I.2 Succession from fen to raised bog, *Peatland Atlas 2023, Heinrich-Böll-Stiftung & others, 13.*

Raised bogs are typically found in the midlands region of Ireland. In some cases, they are the succession of fens wherein the decomposing organic material grows beyond the water's surface. The peat material expands and grows but, in contrast to the fen type, it is ombrotrophic. This means it gains nutrients from rainwater and atmospheric moisture. These peatlands are called raised bogs because their structure forms a dome shape that is raised above ground level. The

⁵ Peter Foss and Catherine O'Connell, "Ireland," in *Mires and Peatlands of Europe: Status, Distribution and Conservation*, ed. Hans Joosten, Franziska Tanneberger, and Asbjørn Moen (Stuttgart: Schweizerbart Science Publishers, 2017), 450.

primary peat-forming plant in raised bogs is a type of moss called sphagnum.⁶ This moss is specifically suited to waterlogged, acidic bog conditions. It can hold up to twenty times its own weight in water.

Blanket bogs in Ireland are found along the western coast in upland regions.⁷ They formed more recently than fens and raised bogs, approximately 4000–7000 years ago. In contrast to the other types, blanket bogs are the result of specific climate conditions, namely consistently heavy rainfall. This rain created waterlogged conditions in poorly draining ground soils which over time, due to the accumulation of plant matter, began to form peat. Blanket bogs are shallower than raised bogs but are similarly highly acidic. Vegetation in these ecosystems is primarily composed of heathers and shrubs.

Peatlands are geographic phenomena. The distribution of peatland types across Ireland has impacted modes of engagement with them. As extraction has remade the composition of peatlands, this distribution is contested. Figure I.3 shows the most up-to-date map of the distribution of peatlands and peat soils as of 2024. Because peatlands are composed of accumulated and preserved organic materials over time, they are archives of their own history. Figure I.4 shows a cross section of a peatland in County Westmeath which reveals the layers of differently aged peat. Peat of different ages has different water content and different density.

⁶ Foss and O’Connell, *Mires and Peatlands of Europe*, 451.

⁷ F. H. A. Aalen, Kevin Whelan, and Matthew Stout, eds., *Atlas of the Irish Rural Landscape* (Toronto: University of Toronto Press, 1997), 117.

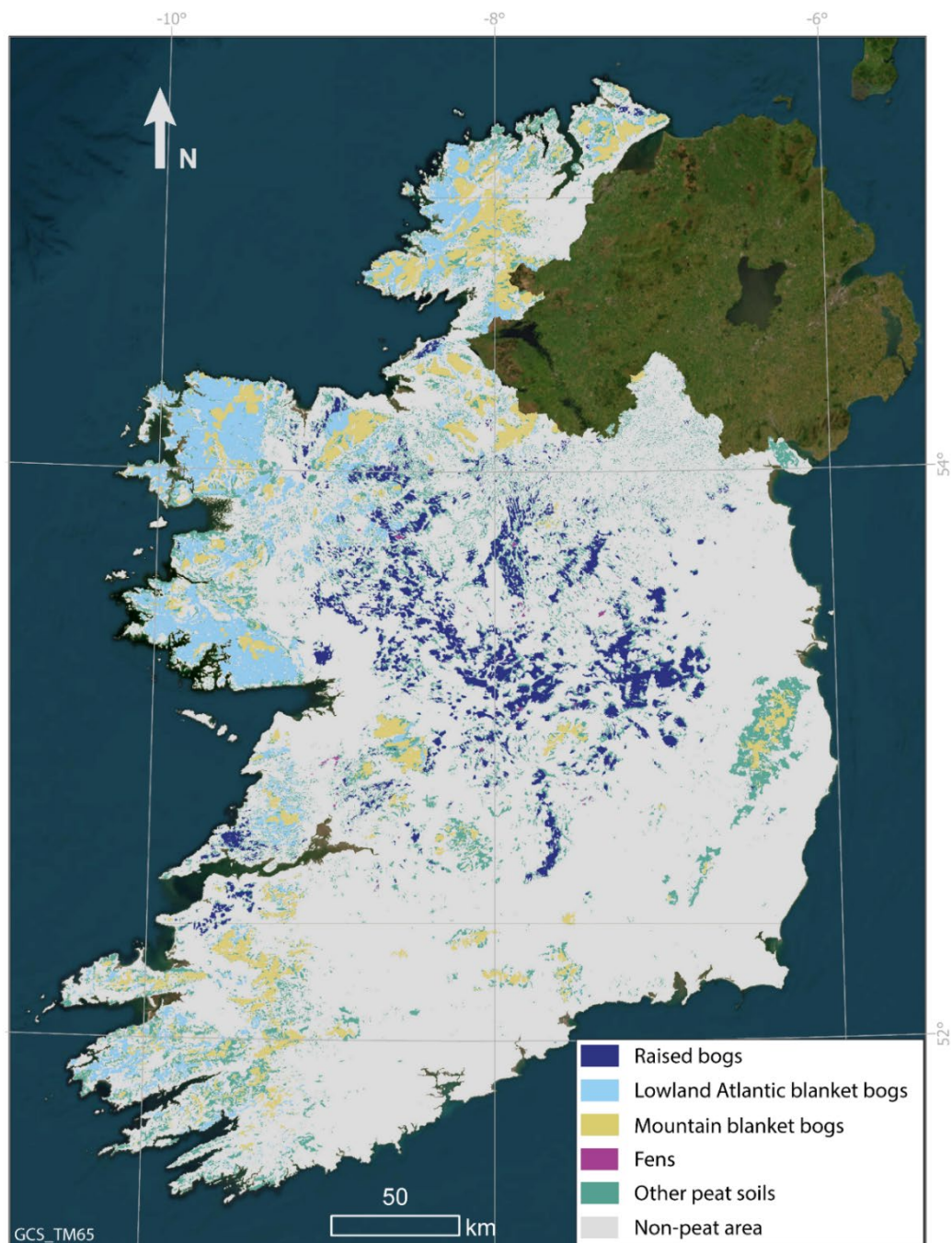


Figure I.3 Peat soils map2024, in Louis Gilet, Terry R. Morley, Raymond Flynn, and John Connolly. "An Adaptive Mapping Framework for the Management of Peat Soils: A New Irish Peat Soils Map." (2024).



Figure I.4 Cross-section of cutaway bog in County Westmeath, author's photograph, 2023.

Beyond scientific understandings, other ways of knowing peatlands have evolved through different human-nature relationships as this thesis demonstrates. Indigenous Irish communities' historical dependency on peat for domestic fuel generated specific language and ways of relating to

peatlands. The colloquial word for peat fuel in Ireland is *turf*.⁸ The Gaelic word is *móin*. Peatlands are sometimes referred to as *boglands*, or *portach*, in Irish. Peat extraction is known as *cutting*, *winning* or *harvesting*. The landscape that remains after extraction is called *cutaway*. This language reflected historical and contemporary rural entanglements with peatlands. Peat, when extracted from peatlands and dried, is a source of fuel. It emits more carbon when it is burned than coal, and the length of time it takes peat to accumulate in peatlands designates it as a non-renewable resource. Historically, this materiality has been contested. The hydrous conditions of peatlands and the association between peat extraction and subsistence economies have caused it to be associated with organic energy regimes.

II. Contested landscapes

The legacies of historical interactions with peatlands impact contemporary debates about their governance and management. Ireland's peatlands exist within national discourses about ecology and climate, energy security, rural socio-cultural and economic concerns, and political narratives about *transition*.

Within the climate and biodiversity crisis discourse, the value of peatlands is determined by their capacity to provide solutions to these crises. Peatlands draw carbon dioxide from the atmosphere and store it as carbon in the peat. Despite their relatively small imprint on the earth's surface, intact peatlands store a great amount of carbon.⁹ When peatlands are drained, they act as carbon sources, contributing to greenhouse gas accumulation in the atmosphere, and climate

⁸ In this thesis, the term 'peat' will be used as an analytical term. 'Turf' will be used as it appears in primary sources.

⁹ Greta Gaudig and Franziska Tanneberger, "A Very Special Ecosystem," in Inka Dewitz et al., eds., *Peatland Atlas: Facts and Figures about Wet Climate Guardians*, 1st ed. (Berlin and Nairobi: Heinrich-Boll-Stiftung; BUND; Greifswald Mire Centre; UN Global Peatlands Initiative, 2023), 12.

change. Intact peatlands are also home to a range of rare flora and fauna. These organisms are rare in their ability to survive in these wet, acidic habitats. Because of this, peatlands are essential for biodiversity. As ecosystems, they also support water systems quality.¹⁰ There is significant pressure, therefore, from international environmental agencies, such as the UNEP Global Peatlands Initiative, to cease existing drainage projects and begin restoration of already drained peatlands.¹¹ Through a relatively simple process of damming drains, peatlands can begin to grow again and foster flora and fauna, repair hydrological systems, and absorb carbon from the atmosphere.¹²

The urgent need for peatland protection has led to a significant increase in academic scholarship. The natural sciences in particular have contributed to the production of knowledge about Irish peatlands through mapping, surveying, and carbon emissions studies.¹³ New methodologies and digital technologies have facilitated this research and informed new ways of understanding nature.

In light of scientific and international pressures, the Irish Government has made commitments to the restoration and protection of peatlands. In 2015, the National Parks and

¹⁰ Dewitz et al., eds., *Peatland Atlas*, 18.

¹¹ United Nations Environment Programme, *Global Peatlands Assessment: The State of the World's Peatlands - Evidence for Action toward the Conservation, Restoration, and Sustainable Management of Peatlands* (United Nations Environment Programme, 2022), <https://doi.org/10.59117/20.500.11822/41222>.

¹² Inka Dewitz et al., *Peatland Atlas*, 16–17.

¹³ Elena Aitova et al., “A Review of Greenhouse Gas Emissions and Removals from Irish Peatlands,” *Mires and Peat* 29 (2023): 1–17; Wahaj Habib et al., “Quantifying Peatland Land Use and CO₂ Emissions in Irish Raised Bogs: Mapping Insights Using Sentinel-2 Data and Google Earth Engine,” *Scientific Reports* 14, no. 1171 (2024): 1–12; Wahaj Habib et al., “Mapping Artificial Drains in Peatlands—A National-Scale Assessment of Irish Raised Bogs Using Sub-Meter Aerial Imagery and Deep Learning Methods,” *Remote Sensing in Ecology and Conservation* 10, no. 4 (2024): 551–62; Louis Gilet et al., “An Adaptive Mapping Framework for the Management of Peat Soils: A New Irish Peat Soils Map,” *Geoderma* 447 (July 1, 2024): 116933.

Wildlife Service produced the *National Peatlands Strategy*, a programme which outlines a roadmap for the restoration and management of peatlands in Ireland.¹⁴ In 2021, the semi-state peat company, Bord na Móna, ceased all peat extraction on its sites.¹⁵ And, in the 2024 *Climate Action Plan*, the government committed to restoring exploited peatlands.¹⁶ These actions would indicate an aligning of scientific and political interests towards the protection of peatlands based on their carbon sequestration and ecological benefits.

These national commitments to restoration exist within wider policies that also consider the value of peatlands as sites for sustainable energy transitions.¹⁷ The *Climate Action Plan* emphasises the need for transformations in energy production and consumption in Ireland in order to reach climate goals. Within these energy considerations, former industrial bogs are viewed as sites for renewable energy production, like wind turbines and solar farms. These kinds of interventions are also part of Bord na Móna's strategy to become a "climate solutions company."¹⁸ Peatlands, then, despite the move away from extraction, remain at the centre of national energy

¹⁴ "National Peatlands Strategy" (Dublin: National Parks and Wildlife Services, 2015), <https://www.npws.ie/sites/default/files/publications/pdf/NationalPeatlandsStrategy2015EnglishVers.pdf>.

¹⁵ "Bord Na Móna Announce Formal End to All Peat Harvesting on Its Lands," Bord Na Móna, January 15, 2021, <https://www.bordnamona.ie/bord-na-mona-announce-formal-end-to-all-peat-harvesting-on-its-lands/>.

¹⁶ Priority 2 of the Climate Action Plan is "supporting the rehabilitation and restoration of degraded peatlands and regeneration and repurposing of industrial heritage assets." in "Climate Action Plan 2024" (Government of Ireland, 2024), 103. <https://www.gov.ie/pdf/?file=https://assets.gov.ie/296414/7a06bae1-4c1c-4cdc-ac36-978e3119362e.pdf#page=null>.

¹⁷ The Climate Action Plan identifies energy production and consumption as significant avenues for meeting Ireland's climate targets.

¹⁸ "Bord Na Móna Announce Formal End to All Peat Harvesting."

discourses. The social and ecological consequences of renewable energy development on drained bogs is a salient topic in Irish media and scholarship.¹⁹

The cessation of peat extraction and the restoration of drained bogs has had economic impacts on the communities and workers in these places who often struggle with this transition.²⁰ In the *Climate Action Plan*, the government has promised significant investment in the midlands region to facilitate a *just transition* for communities and workers who were previously employed in peat extraction and related sectors.²¹ But, the objectives and impacts of the just transition remain contested.²² These tensions are not exclusively being experienced in Ireland. The historical significance of Finland's peat extraction industry has had implications for workers there as the country has also moved away from peat extraction.²³

¹⁹ Stephen Robb, "Building wind farms on peatlands could undermine green transition," *The Farmer's Journal*, May 24, 2023, <https://www.farmersjournal.ie/news/news/building-wind-farms-on-peatlands-could-undermine-green-transition-765718>; Steven Fox, "Wasted Wetlands: pumping of bogs by Bord na Móna 'hampering rehabilitation,'" *The Journal*, April 5, 2024, <https://www.thejournal.ie/wasted-wetland-peatland-drainage-6345093-Apr2024/>; and Patrick Bresnihan and Patrick Brodie, "From Toxic Industries to Green Extractivism: Rural Environmental Struggles, Multinational Corporations and Ireland's Postcolonial Ecological Regime," *Irish Studies Review* 32, no. 1 (January 2, 2024): 93–122; Patrick Bresnihan and Patrick Brodie, "Data Sinks, Carbon Services: Waste, Storage and Energy Cultures on Ireland's Peat Bogs," *New Media & Society* 25, no. 2 (February 2023): 361–83.

²⁰ Jamie Rohu, "Sustainable Bogs: Challenges in Transition" (PhD Thesis, Dublin, Trinity College Dublin, 2022).

²¹ "Climate Action Plan 2024," 98-107.

²² Jamie Rohu. "Burning Question: What Does a Peat-Free Future Hold for the Midlands?" *TheJournal.ie*, April 14, 2021. Accessed April 17, 2021. <https://www.thejournal.ie/readme/burning-question-peat-5402220-Apr2021/>;

²³ Hanna Lempinen and Annukka Vainio, "Lost in Transition: Peat Workers' Experiences of Finland's Low Carbon Transition Policy," *The Extractive Industries and Society* 15 (2023): 1–9.

According to environmental policy researchers Craig H. Bullock and Marcus Collier, governance of peatlands in Ireland represents a “confrontation of ecological and cultural values.”²⁴ The social and cultural meanings of peat extraction and burning shape the politics of peatland protection.²⁵ Peat extraction continues throughout Ireland in the form of turbary extraction for domestic consumption. Resistance to efforts to phase out this extraction are based on economic and socio-cultural factors. While recent energy crises have made the use of other forms of fuel uneconomical, peat has remained a necessity for some rural consumers.²⁶ This tension is clear in public policy scholar Bernadette Connaughton’s study on the multidimensionality of peat

²⁴ Craig H. Bullock and Collier, “When the Public Good Conflicts with an Apparent Preference for Unsustainable Behaviour,” *Ecological Economics* 70 (2011), p.972.

²⁵ Decision-making with regards to Ireland’s peatlands and climate-change mitigation is an incredibly salient topic in Irish media. For a brief overview of the current themes and perspectives within this debate, see the following articles: Rodney Farry. “Galway Turf Cutters Turn Environmental Protectors in Bid to Preserve Bogs.” *The Irish Times*, January 18, 2021, <https://www.irishtimes.com/news/environment/galway-turf-cutters-turn-environmental-protectors-in-bid-to-preserve-bogs-1.4460627>; Colm McCarthy. “Ireland’s Decarbonisation Debate Is Just Beginning.” *The Farmers Journal*, April 14, 2021, <https://www.farmersjournal.ie/colm-mccarthy-ireland-s-decarbonisation-debate-is-just-beginning-615211>; Colin Sheridan, “Bogs, Brussels, and Birthrights: Cutting Turf Is Not Just a Right but a Religion in Rural Ireland,” *Irish Examiner*, April 8, 2024, <https://www.irishexaminer.com/news/spotlight/arid-41368042.html>; Marie Conboy, “‘I’ll Burn My Turf’: The Fight to Save an Enduring Tradition in Leitrim,” *Leitrim Observer*, October 1, 2024, <https://www.leitrimobserver.ie/news/local-news/1618640/ill-burn-my-turf-the-fight-to-save-an-enduring-tradition-in-leitrim.html>.

²⁶ Eoghan Moloney, “Call to restart Irish peat harvesting amid energy crisis and Russia’s war on Ukraine,” *Irish Independent*, March 10, 2022, <https://www.independent.ie/news/call-to-restart-irish-peat-harvesting-amid-energy-crisis-and-russias-war-on-ukraine/41431887.html>.

extraction governance in rural Ireland.²⁷ She describes the competing pressures on national policymakers between international frameworks and local resistance. Peatland governance, Connaughton argues, requires the collaboration and coordination of actors with often conflicting perspectives on the value of peat landscapes.²⁸ These contestations over the value and governance of Irish peatlands highlight the fluidity of understandings of these more-than-human environments, as well as the power dynamics inherent in just transition policies.

III. Literature review

Peatlands are transitional landscapes. While they are terrestrial, their hydrology places them in a liminal space between wet and dry land. This fluid materiality informs the approach of this thesis. The history of humans' relationships to peatlands incorporates many knowledges and meanings about their value. The field of energy history can inform understandings about peat as a fossil fuel. Histories of labour reveal ways of understanding natural landscapes as sites of work. Literature on the mobilisation of resources speaks to the centrality of the state in contributing to wider understandings of the non-human environment through exercises of power. And literature on the history of nature protection sheds light on the many influences on historically emerging environmental discourses. This thesis brings these fields into conversation in order to disentangle

²⁷ Bernadette Connaughton, "Multi-Level Governance and Policy Contestation: Ambiguity and Conflict in the Implementation of Peatland Conservation in Ireland," *Gestión y Análisis de Políticas Públicas*, 34 (2024): 109–122.

²⁸ Margaret O'Riordan, Marie Mahon, and John McDonagh. "Power, Discourse and Participation in Nature Conflicts: The Case of Turf Cutters in the Governance of Ireland's Raised Bog Designations." *Journal of Environmental Policy & Planning* 17, no. 1 (January 2015): 127–145; and Margaret O'Riordan, John McDonagh, and Marie Mahon. "Unlikely Alliances? Knowledge, Power and the Collaborative Governance of Irish Peatlands." *Geoforum* 100 (March 2019): 188–198.

the overlapping and interdependent histories of meaning-making, extraction, and ecological degradation that occurred in Ireland's bogs.

Energy history

This research is situated within the field of energy history. Energy history emerged as a field of research alongside political concerns about energy security in the 1970s.²⁹ The objective of this field is understanding societal pathways towards certain energy systems and not others. Energy production and consumption are understood as forces within wider economic, political, and ecological transformations. A seminal contribution to the energy history literature is Alfred Crosby's, *Children of the Sun*.³⁰ Crosby takes a *longue durée* perspective on the progressive intensification of energy consumption by the human species. Taking the energy of the sun as his starting point, Crosby demonstrates that throughout history, humans have found more technologically efficient ways (breakthroughs) to capture the energy of the sun, from plants to coal to hydrocarbons to nuclear power. His contribution is a framework for understanding historical energy breakthroughs with a view to understanding contemporary energy crises. Crosby's undifferentiated approach to humanity as a whole leaves room for further research on how these 'breakthroughs' are mediated in regionally or peripherally specific ways. He also obscures the power dynamics involved in control, access, and management of energy sources and converters.

²⁹ Duccio Basosi, "Lost in Transition. The World's Energy Past, Present and Future at the 1981 United Nations Conference on New and Renewable Sources of Energy | Energy History," *Journal of Energy History* 4, (2020); David E. Nye, *Consuming Power: A Social History of American Energies* (Cambridge, Mass: MIT Press, 1998), 217–246.

³⁰ Alfred W Crosby, *Children of the Sun: A History of Humanity's Unappeasable Appetite for Energy* (New York: W.W. Norton, 2006).

Some authors apply a systems approach to understanding energy. Prolific energy historian, Vaclav Smil defines energy systems as, “any arrangement whereby the humans use the Earth’s resources to improve their chances of survival and to enhance their quality of life.”³¹ Within Smil’s framework, these systems require *energy sources*, *ways of converting energy*, and *end uses of energy*. Energy sources can be renewable, like sunlight, wind, and ocean currents. They can also be non-renewable, as in the case of fossil fuels like coal, oil, and gas. These sources require mechanisms through which to be converted to energy for utilisation. Smil calls these mechanisms *prime movers*.³² For example, the energy of the sun is transformed into kinetic energy by human bodies consuming plant materials that have photosynthesised. Fossilised biomass in coal is converted to mechanical or heat energy via steam engines. End uses within energy systems are infinite and include light, heating, power, and systems of transportation.³³

From a foundational understanding of energy systems and how they function within societies, the literature has focused on the phenomenon of *energy transitions*.³⁴ Smil, for instance, defines energy transitions as “the change in the composition (structure) of primary energy supply, the gradual shift from a specific pattern of energy provision to a new state of energy system.”³⁵ In this understanding, societies move away from previous sources of energy and prime movers into new energy regimes based on new technologies and more intense ways of consuming energy. The

³¹ Vaclav Smil, *Energy Transitions: Global and National Perspectives*, Second edition (Santa Barbara, California: Praeger, an imprint of ABC-CLIO, LLC, 2017), 1.

³² Vaclav Smil. *Energy and Civilization: A History*. Cambridge, Massachusetts: The MIT Press, 2017, 6-9.

³³ Smil, *Energy Transitions*, 11.

³⁴ Kathleen Araújo, “The Emerging Field of Energy Transitions: Progress, Challenges, and Opportunities,” *Energy Research & Social Science* 1 (March 2014): 112–21; Vaclav Smil, *Energy Transitions: History, Requirements, Prospects* (Westport: ABC-CLIO, LLC, 2010); Unger, Richard W. (ed.), “Energy Transitions in History: Global Cases of Continuity and Change,” *RCC Perspectives* 2013, no 2.

³⁵ Smil, *Energy Transitions*, vii.

literature focuses on different types of energy systems to demonstrate the transitions from one to another. Organic or renewable systems include biomass, wind, and water. Fossil, mineral, or non-renewable systems are based on the use of coal and hydrocarbons.

A pioneer of this discourse is historian Rolf Peter Sieferle, who incorporates the idea of energy systems into explanations of social change.³⁶ He specifically focusses on the industrial revolution in England. In his groundbreaking work *The Subterranean Forest* he examines the significance of coal as a relatively abundant energy source in England and shows how the availability of this carbon energy facilitated industrialisation. Sieferle argues that coal solved a geographical problem for English industrialists. Biomass energy imposed specific parameters of land for production, while the punctiform nature of coal, combined with its higher energy density facilitated England's ability to industrialise.

Following Sieferle, scholars have been particularly concerned with explanations of the English Industrial Revolution as the paradigmatic energy transition. Studies of the English Industrial Revolution focus on the economic circumstances surrounding industrialisation. Historian E. A. Wrigley, in *Energy and the English Industrial Revolution*, conceptualises the transition from an agrarian to industrial economy.³⁷ Access to coal, and technologies for converting it, necessitated new kinds of economic organisation. The economy transitioned from agrarian to industrial through urbanisation and increasingly sophisticated networks of transportation. The relevance of this research to the case of Irish peatlands is clear. Ireland was a colony of the British Empire and subject to the same kinds of logics about energy use and consumption, albeit without the concurrent industrial transformation. Furthermore, economic valuations of peat fuel were almost

³⁶ Rolf Peter Sieferle. *The Subterranean Forest: Energy Systems and the Industrial Revolution*. Knapwell, Cambridge: White Horse Press, 2010.

³⁷ E. A. Wrigley. *Energy and the English Industrial Revolution*. Cambridge; New York: Cambridge University Press, 2010.

exclusively based on comparisons between the energetic and chemical components of coal and peat.

Marxist theorists have contributed further interpretations of the Industrial Revolution. Andreas Malm, in *Fossil Capital*, argues that the competitive constraints of capitalism facilitated individualistic practices and impeded the kind of cooperation necessary for industrialists to utilise other energy sources.³⁸ Malm situates the history of fossil fuel regimes within a wider history of capitalism and power. Industrialisation, then, is necessarily also an economic transformation whereby the means of production are enhanced to create more goods, and more energy. In another Marxist reading, political theorist Timothy Mitchell frames energy transitions through the lens of class formation and argues that the democratic organisation of coal production was undesirable to the owners of coalpits/resources/capitalists who instead found the limited labour required for oil production and distribution easier to control.³⁹ In Mitchell's study, he argues that the different mechanisms and outcomes surrounding different kinds of resources are related to their materiality.

Peat plays a marginal role in the existing scholarship. This reflects the fluid categorisation of peat as sometimes organic and sometimes fossil fuel. It further reflects the relatively limited usage of peat as fuel globally. For example, in *Energy and Civilization*, Smil describes the transitions from wood to coal to oil, and their associated technologies.⁴⁰ Regarding peat, he calls it "a young fossil fuel."⁴¹ According to Smil, it was valuable merely as a supplementary fuel during the Dutch Golden Age. Alfred Crosby calls peat "the adolescent fossil fuel," and mentions its characteristics only relative to coal.⁴² Like Smil, he acknowledges the significance of peat fuel in

³⁸ Andreas Malm, *Fossil Capital: The Rise of Steam Power and the Roots of Global Warming* (London Brooklyn, New York: Verso, 2016).

³⁹ Timothy Mitchell. *Carbon Democracy: Political Power in the Age of Oil*. London; New York: Verso, 2011.

⁴⁰ Smil. *Energy and Civilization*.

⁴¹ Smil, 196.

⁴² Crosby, *Children of the Sun*, 61.

the Netherlands in the seventeenth century.⁴³ This limited attention in the scholarship creates a space for considerations of peat within wider understandings of energy transitions, their causes and their outcomes.⁴⁴

The framework of *energy transition* has been challenged in the scholarship. In their book *The Shock of the Anthropocene*, historians Christophe Bonneuil and Jean-Baptiste Fressoz argue that the framework of *energy additions* is more appropriate.⁴⁵ They argue that while new primary energy sources enter economies their addition does not act as a substitute for the previous energy sources. The authors demonstrate the pattern of new primary energy sources which enter into use, but these additions happen in parallel to continually increasing levels of consumption of other sources. In the context of Irish peatlands, this framework can help to explain the diversification of the energy economy with more kinds of fuels coming into usage alongside increased peat consumption. While it is true that there was an observable transformation of the ways that peat was extracted and consumed in the twentieth century, this happened alongside an increasing influx of hydrocarbons to fuel the machinery used to extract peat. As well as this, the range of primary fuels used to produce electricity became quite diverse in Ireland. Peat was a major contributor to this fuel mix, alongside hydropower, coal, oil, and gas.

Histories of peat can address the limitations of the dominant narratives of energy history and broaden understandings of the ways in which regional or local experiences of energy use contribute to wider transformations. This is clear in historian Katja Bruisch's upcoming book *Burning Swamps* which addresses the case of peat extraction and consumption in Russia and the

⁴³ Crosby, 69.

⁴⁴ Fortunately, peat is beginning to have a presence in the energy history canon. Historian Katja Bruisch's upcoming book *Burning Swamps* examines the case of Russian and Soviet peatlands. See Katja Bruisch, forthcoming, *Burning Swamps: Peat and the Forgotten Margins of Russia's Fossil Economy*.

⁴⁵ Christophe Bonneuil and Jean-Baptiste Fressoz, *The Shock of the Anthropocene: The Earth, History and Us*, trans. David Fernbach, Paperback edition (London New York: Verso, 2017).

Soviet Union.⁴⁶ Bruisch's text contributes a regional perspective to wider narratives of the fossil fuel age in Russian history, utilising the frameworks of energy additions and the fossil economy. Historian Ole Sparenberg similarly considers peat within wider energy transition narratives of Germany's fossil fuel age.⁴⁷ Taking the case study of Berlin in the mid-nineteenth century, Sparenberg argues that peat acted as a "transitional" fuel between the organic and fossil energy regimes.

While the influx of fossil fuels like oil and gas were a feature of the Irish economy in the late twentieth century, alongside the continued use of peat, electricity was the most far-reaching innovation during this period. This thesis is therefore also responding to literature on the history of electrification. From within the energy history discourse, a number of authors have recognised the relationship between electrification and the growth of energy consumption, arguing that the efficiency of the electric transmission of energy facilitated new modes of utilisation across all sectors of the economy. Crosby demonstrates that prior to the innovation of electric power, the material constraints of existing fossil energy systems limited the ability to expand industry.⁴⁸ After it was widely introduced, electricity provided a seemingly unlimited source of power for growth and expansion. Similarly, Smil suggests that the development of electric power was a significant moment of transition wherein the productive capacity of fossil fuels was exponentially increased, facilitating the development of industrial and domestic consumption.⁴⁹

⁴⁶ Katja Bruisch, *Burning Swamps*.

⁴⁷ Ole Sparenberg, "Peat-Powered Berlin: The Role of Peat in the Urban Energy Transition in the Mid-Nineteenth Century." *Environment & Society Portal, Arcadia* (Autumn 2024), no. 13. Rachel Carson Center for

Environment and Society. <https://www.environmentandsociety.org/node/9871/>.

⁴⁸ Crosby, *Children of the Sun*.

⁴⁹ Smil, *Energy and Civilization*.

A considerable body of literature engages with the emergence of electricity infrastructure in the twentieth century and its consequences.⁵⁰ Thomas Hughes' *Networks of Power* is a landmark text in the history of electrification. Hughes shows, through detailed case studies and analysis, that the development of infrastructure necessarily reflects the political and cultural context within which it is developed.⁵¹ The networks of power to which Hughes refers are not only the tangible grids of power stations and electricity lines but also the dynamics between actors investing in and controlling these networks. Hughes explains the development of electricity infrastructure as the outcome of political and economic capacity. Historian Christopher Jones, in *Routes of Power*, reflects and expands upon Hughes' work, and demonstrates that emerging electrification systems also reflected the priorities and biases of the state or private interests with regards to access to power.⁵² Jones argues that decision-making about the development of infrastructure leads to unequal outcomes in the supply of energy between urban and rural spaces, or between industrial or domestic end users. He further argues that governments of twentieth century Western states understood the importance of electricity provision for improving living conditions and modernising labour practices. These kinds of logics are visible in the history of Irish electrification. The literature on electrification raises the question of how the conversion of peat to electricity contributed to the developmental goals of the Irish state.

In response to the overwhelmingly top-down perspectives in the energy transition literature, historian David Nye, in *Consuming Power*, contributes a social history of energy transitions in the United States.⁵³ Nye demonstrates that technologies of energy are adopted

⁵⁰ Christopher F. Jones. *Routes of Power: Energy and Modern America*. Cambridge, Massachusetts: Harvard University Press, 2014; Thomas Parke Hughes. *Networks of Power: Electrification in Western Society, 1880-1930*. Baltimore: Johns Hopkins University Press, 1983.

⁵¹ Hughes. *Networks of Power*.

⁵² Jones. *Routes of Power*.

⁵³ David E. Nye, *Consuming Power: A Social History of American Energies* (Cambridge, Mass: MIT Press, 1998).

differently by different users across space, time, and culture. This attention to the uses of energy rather than the sources or prime movers facilitating supply forms part of a significant corpus of literature surrounding the modalities of energy transitions in the domestic sphere. Historian Ruth Schwartz Cowan in her groundbreaking 1983 work *More Work for Mother*, addresses the omission of domestic labour from considerations of industrialisation in historiography dealing with the United States. While her text is a socio-cultural history of technology, Cowan positions her work in conversation within the larger discourse of industrial development.⁵⁴

Cowan's work has been expanded upon by other scholars towards a more intersectional approach to the study and critique of energy history. The exploration of the home as a site of energy transition necessarily introduces the categories of gender and class into conversations about energy transitions. Access to energy technologies and infrastructures, as well as the mechanisms through which energy cultures are reproduced is the focus of historians Abigail Harrison Moore and Ruth Sandwell's co-edited volume *In A New Light*.⁵⁵ Energy use and transition within the home is an emerging discourse. Considering the dominance of peat as a domestic fuel in Ireland, this thesis will situate the home as a central site of transformation within the wider discourse of industrial peat extraction.

Energy historians Ute Hasenöhl and Jan-Henrik Meyer, in their paper "The Energy Challenge in Historical Perspective," question the approaches taken by historians of energy towards better understandings of energy transitions.⁵⁶ The authors outline some of the key gaps in the literature. They call for more empirical approaches to energy transition scholarship as a way to

⁵⁴ Ruth Schwartz Cowan, *More Work for Mother: The Ironies of Household Technology from the Open Hearth to the Microwave* (New York: Basic Books, 1983), 4.

⁵⁵ Abigail Harrison-Moore and Ruth W. Sandwell, eds., *In a New Light: Histories of Women and Energy* (Montreal Kingston London Chicago: McGill-Queen's University Press, 2021).

⁵⁶ Ute Hasenöhl and Jan-Henrik Meyer, "The Energy Challenge in Historical Perspective," *Technology and Culture* 61, no. 1 (2020): 295–306.

challenge the grand narrative frameworks of scholars like Smil and Crosby. They further call for greater attention on the history of consumption and women's participation within changing energy systems. Finally, they identify the "influence of transnational, international, and multinational actors," as being a significant avenue for deeper understandings of global energy systems.⁵⁷ Peat use in Ireland provides an opportunity to address these open questions.

Ideas of nature and resource imaginaries

While this thesis considers the mechanics of the peat energy system in Ireland, it is important to consider the wider political and social contexts within which this system existed. Environmental history is particularly suited to understanding how ideas of nature are mobilised to frame different modes of engagement with the non-human environment. Literary scholar Raymond Williams, for instance, considers how the construction of meanings about nature facilitates mechanisms of exploitation or protection of nature.⁵⁸ Williams argues that humans and nature are inseparable, and the recognition of this reality is necessary for more equitable relationships. He further argues that dominant ways of engaging with, and exploiting nature are often determined by individuals or groups with power in societies. This thesis is therefore responding to literature on the historical construction of meanings of nature.

Peat, as it exists in situ in bogs, is not inherently a 'natural resource.' Human geographer Gavin Bridge argues that components of the non-human environment *become* natural resources through social processes of value-making.⁵⁹ Human interactions with peatlands inform beliefs and

⁵⁷ Hasenöhl and Meyer, "The Energy Challenge," 302.

⁵⁸ Raymond Williams, "Ideas of Nature," in: Raymond Williams, *Problems in Materialism and Culture: Selected Essays* (London: Verso, 1980), 67-85.

⁵⁹ Gavin Bridge, "Material Worlds: Natural Resources, Resource Geography and the Material Economy," *Geography Compass* 3, no. 3 (2009): 1217-44.

attitudes about their value. For example, in the absence of woodlands, people living alongside bogs needed to cut peat for fuel and developed tools to conduct this work. Peat had a subsistence value that was geographically and technologically informed. Crucially, however, ‘natural resource’ is not a stable category, as Bridge demonstrates. He writes, “what qualifies as a resource can vary over time and space, because it is technology and culture (in its widest sense) that confer utility and value onto materials.”⁶⁰ This means that resources are a fluid category whose meaning can change across time, space, and interest groups. The heterogeneity of human societies inevitably creates diverse needs and beliefs. Different groups, communities and individuals in societies confer value to material based on different metrics. Bridge argues that power dynamics within societies are important for understanding the ultimate mobilisation of natural resources.⁶¹ That is, powerful groups, individuals, companies, or states often set the dominant value for resources that is then embodied within wider society and reproduced through processes of extraction, production, or transformation.

Environmental historian Esa Ruuskanen’s work on ‘Irish bogland frontiers’ has been particularly informative for this thesis.⁶² Ruuskanen uses the framework of the ‘frontier’ to analyse the historical processes of value-making of Irish peatlands from the 1770s to the 1840s. His research demonstrates how scientific knowledge-making, technology and infrastructural development were all crucial components in the construction of the imperial peatland-resource imaginary. Ruuskanen’s conception of the socio-technical imaginary derives from Science and Technology Studies. Scholar Sheila Jasanoff’s defines these imaginaries as “collectively held, institutionally stabilized, and publicly performed visions of desirable futures, animated by shared understandings of forms of social life and social order attainable through, and supportive of,

⁶⁰ Bridge, 1219-20.

⁶¹ Bridge, 1220–22.

⁶² Esa Ruuskanen, “Encroaching Irish Bogland Frontiers:: Science, Policy and Aspirations from the 1770s to the 1840s,” in *Histories of Technology, the Environment and Modern Britain*, ed. Jon Agar and Jacob Ward (UCL Press, 2018), 22–40, <https://doi.org/10.2307/j.ctvqhsmr.6>.

advances in science and technology.”⁶³ This way of thinking about resources and how they are understood within wider concepts of development or progress is useful in considerations of the Irish case. Actors within the Irish state considered increasing energy use as central to wider goals of modernisation and social and economic development.

Literature that considers the mobilisation of resources is often concerned with the role of the state in these processes. In political scientist and anthropologist James C. Scott’s *Seeing Like a State*, he explores how states exercise control through the careful rationalisation of people and resources.⁶⁴ Scott argues that the state intentionally narrows its field of vision to allow for rigid planning and extractive practices. In the eighteenth and nineteenth centuries, this manifested in mapmaking, surveying, and quantification of human and non-human resources. Scott expands upon this time period to describe the visions of modernity and development that dominated economies in the twentieth century. Despite outward declarations of public good, Scott argues that many state projects of this time were based on profit maximisation and had negative consequences for biodiversity, ecosystems and social structures.

The limitation of Scott’s argument lies in his own narrow view of ‘the state’ as a unified force with a singular agenda, leaving little room for a complex reading of the state as a universe of various actors with competing visions. Scott’s contribution that states exercise greater control over nature through survey and rationalisation is clear in the Irish case, both in the colonial period and after independence. However, the case of peatlands illuminates the complexity of the category of ‘the state.’ Institutional and ideological continuity with regard to peat extraction in the post-independence period highlights the tension between nationalist rhetoric and the realities of

⁶³ Sheila Jasanoff and Sang-Hyun Kim, eds., *Dreamscapes of Modernity: Sociotechnical Imaginaries and the Fabrication of Power* (Chicago; London: The University of Chicago Press, 2015), 4.

⁶⁴ James C. Scott. *Seeing like a State: How Certain Schemes to Improve the Human Condition Have Failed*. Yale Agrarian Studies. New Haven: Yale University Press, 1998.

governance. As well as this, increasing bureaucratisation, institution building, and globalisation all influenced the values and actions of what might be considered the Irish state.

There have been several studies that consider the question of the Irish state's mobilisation of resource for development. These largely focus on the Shannon hydroelectric scheme, and the use of hydropower for the generation of electricity. *The Shannon Scheme and the Electrification of the Irish Free State* features contributions from a variety of historians and addresses the multidimensional history of the project.⁶⁵ These contributions include discussions of the labour, infrastructure, and visual culture of the project. These contributions function within overall considerations of the Irish state and its role in the mobilisation of the Scheme. Historian Lothar Schoen contributes a nuanced analysis of the administrative and political complexity of 'the state' in the 1920s.⁶⁶ He demonstrates how the case study of the Shannon Scheme exposes the multidimensionality of energy projects. The mobilisation of hydropower in this case helped to serve wider political and economic goals. As well as this, in a contribution by historian Andy Bielenberg, the visual culture which accompanied the development of the Shannon Scheme is shown to have been a crucial component of the Irish state's strategy of connecting the scheme to ideas of the state, and the nation.⁶⁷

Historian SORCHA O'Brien further expands upon the expressions and influence of the idea of the nation in the Shannon Scheme. In *Powering the Nation*, O'Brien discusses the Irish Free State government's reliance on symbols and cultural markers of the nation as a means through

⁶⁵ Andy Bielenberg, ed., *The Shannon Scheme: And the Electrification of the Irish Free State* (Dublin: Lilliput Press, 2002).

⁶⁶ Lothar Schoen, "The Irish Free State and the Electricity Industry, 1922 - 1927," in Bielenberg, ed. *The Shannon Scheme*: 28–47.

⁶⁷ Andy Bielenberg, "Seán Keating, the Shannon Scheme and the Art of State-Building," in Bielenberg, ed. *The Shannon Scheme*: 114–37.

which to gain political legitimacy.⁶⁸ She argues that the tensions between the historically constructed symbols of the nation and the industrial modernity of the technologies of the Shannon Scheme were significant in shaping government policies during this period. O’Brien uses the visual culture of the Shannon Scheme project to draw out these tensions. She also introduces the frameworks of essentialism, that is, inherited traditions, and epochalism, an awareness and participation in the progress of the contemporary era. These function as a way to disentangle the conflicting forces driving resource mobilisation in the post-independence state.⁶⁹ The value of these approaches for this thesis is clear. The exploitation of peatlands as part of state modernisation policies was often in tension with cultural associations of tradition and national identity. As well as this, visual material culture was crucial in the state’s project of disseminating and promoting new ways of seeing peatland nature.

The Shannon hydroelectricity scheme is further a salient site of analysis in considerations of contemporary climate crisis. Environmental law and policy scholar Sinead Mercier invokes the example of the Shannon Scheme to illuminate the potential for state intervention in energy transitions.⁷⁰ In her paper, ‘Ireland’s Energy System: The Historical Case for Hope in Climate Action,’ Mercier argues that the state interventionist approach taken by the government and ESB in the 1920s illustrates the potential for large-scale interventions in the contemporary Irish energy system. While this paper demonstrates the value of historical research to inspire contemporary ways of thinking, it simplifies the complex and often competing interests of political actors at the time. The Shannon Scheme was not born out of a singular desire for public-goods provision but alongside interests in increasing industrial production to strengthen the Irish economy. Furthermore, by taking this limited view, the relationships between labour and nature are excluded.

⁶⁸ Sorcha O’Brien, *Powering the Nation: Images of the Shannon Scheme and the Electrification of Ireland* (Newbridge, Co. Kildare, Ireland: Irish Academic Press, 2017), 8–40.

⁶⁹ O’Brien, 8–40.

⁷⁰ Sinead Mercier, “Ireland’s Energy System: The Historical Case for Hope in Climate Action,” *New Labour Forum* 30, no. 2 (2021): 21–30.

The ecological consequences of the Shannon Scheme, as well as the harsh and sometimes fatal realities of working conditions, deserve recognition and accounting for in presentations of the historical ‘benevolent’ state. The literature on large energy projects contributes to understandings of the state’s ability to mobilise socio-technical resource imaginaries. However, a number of questions remain to be answered. For instance, the literature has been largely focussed on the Shannon Scheme. Peat provides an opportunity for consideration of fossil energies.

The literature is further limited in its singular considerations of top-down developments of resources. Meaning-making with regard to nature, and resources in particular, happens in more socially dispersed ways. In “Fossil Mentalities: How Fossil Fuels Have Shaped Social Imaginaries,” historians Matthias Schmelzer and Mellisa Büttner introduce social differentiation to the construction of fossil imaginaries through the concept of “fossil mentalities.”⁷¹ The authors conduct a review of existing scholarship on social imaginaries as well as energy history with regard to fossil fuel use and energy transitions. In their assessment, the concept of ‘fossil imaginaries’ implies a broad societal consensus with regards to fossil fuel proliferation and consumption. They write, “the mass usage of fossil fuels, which enabled more intense forms of the appropriation of nature, thus shaped social imaginaries regarding human-nature relations.”⁷² They further argue, however, that different groups within societies have different beliefs, values, experiences, and expectations. They isolate these logics into the framework of “fossil mentalities.” They describe these as “class-specific and regionally divergent mentalities” that were “socially differentiated and related to material interests and power relations in society.”⁷³ This intervention in the literature further delineates between the role of the state in disseminating resource imaginaries and the influence of bottom-up desires and demands.

⁷¹ Matthias Schmelzer and Melissa Büttner, “Fossil Mentalities: How Fossil Fuels Have Shaped Social Imaginaries,” *Geoforum* 150 (2024): 1–11.

⁷² Schmelzer and Büttner, “Fossil Mentalities,” 4.

⁷³ Schmelzer and Büttner, “Fossil Mentalities,” 10.

This thesis is contributing a unique intervention to historiography on the Irish state development in the twentieth century. While this literature considers political and economic explanations for state development, the lens of resource-making allows these dimensions to be considered alongside socio-cultural factors and environmental change.⁷⁴ Furthermore, it will incorporate a more-than-human approach to identify the resistances of the non-human environment in response to the state's mobilisation of peat energy.⁷⁵

The history of nature protection

This thesis considers Ireland's peatlands within wider histories of nature protection. This literature is a significant strand of environmental history and engages with, among other things, the origins of nature protection, romantic ideas of wilderness, as well as the emergence of the concept of the environment.⁷⁶ This literature is valuable in illuminating the national and global contexts within which imperatives towards nature protection emerged. However, this discourse is limited in its ability to account for less charismatic landscapes. Peatlands, historically considered wastelands, did not qualify for the kinds of romantic associations with wild nature reserved for national parks.

⁷⁴ Mary E. Daly, *Industrial Development and Irish National Identity, 1922-1939* (Syracuse University Press., 1992); Robert F. Foster, *Modern Ireland: 1600-1972* (London: Penguin Books, 2011); Cormac Ó Gráda, *A Rocky Road: The Irish Economy since the 1920s* (Manchester: Manchester Univ. Press, 1997).

⁷⁵ Emily O'Gorman and Andrea Gaynor, "More-Than-Human Histories," *Environmental History* 25, no. 4 (October 1, 2020): 711–35.

⁷⁶ Joachim Radkau, *The Age of Ecology* (Newark, UK: Polity Press, 2014); William Cronon, "The Trouble with Wilderness; or, Getting Back to the Wrong Nature," in *Uncommon Ground: Rethinking the Human Place in Nature* (New York: W. W. Norton & Co., 1995), 69–90; Paul Warde, Libby Robin, and Sverker Sörlin, *The Environment: A History of the Idea* (Baltimore: Johns Hopkins University Press, 2018).

Their value in historical discourses about nature protection and environmental governance was presented within ideas of ecosystems, scientific importance, and global environmental governance. Therefore, this case will be a valuable addition to understandings of the history of the environmental governance of these peripheral landscapes.

In *The Environment: A History of the Idea*, Paul Warde, Libby Robin, and Sverker Sörlin examine the complex historical context surrounding the emergence of the concept of the environment.⁷⁷ This concept, they argue, is essential to understanding the ways in which human and non-human interactions have been governed in the twentieth and twenty-first centuries. A critical contribution of their research is the illustration of the multidimensional construction of the concept. This construction encompassed, among other things, the globalisation of scientific research, ecology and conservation discourses, international governance, environmental activism, and justice movements.

The literature surrounding the rise of environmental governance is particularly concerned with the internationalisation of nature protection and conservation movements.⁷⁸ These studies contribute to understandings of international power dynamics and the emergence of a Western dominated conception of environmental protection.⁷⁹ And, while this focus on international

⁷⁷ Warde et al., *The Environment*

⁷⁸ Martin W. Holdgate, *The Green Web: A Union for World Conservation* (Oxon [England]: Earthscan, 2013); Wolfram Kaiser and Jan-Henrik Meyer, *International Organizations and Environmental Protection: Conservation and Globalization in the Twentieth Century*, *The Environment in History*, volume 11 (New York (N.Y.): Berghahn Books, 2017); Anna-Katharina Wöbse, “‘The World after All Was One’: The International Environmental Network of UNESCO and IUPN, 1945–1950,” *Contemporary European History* 20, no. 3 (August 2011): 331–48; Iris Borowy, “Before UNEP: Who Was in Charge of the Global Environment? The Struggle for Institutional Responsibility 1968–72,” *Journal of Global History* 14, no. 1 (March 2019): 87–106.

⁷⁹ Sverker Sörlin and Eric Paglia, *Stockholm and the Rise of Global Environmental Governance: The Human Environment*, 1st ed. (Cambridge University Press, 2024).

institutionalism sheds light on the dynamics and legacies of UN and European developments, there is little attention to the emergence of other kinds of environmental governance.

Economic historian Joan Martinez-Alier distinguishes between three strands of environmentalism to account for the ways that different approaches to governance have emerged.⁸⁰ The first is “the cult of wilderness,” which considers charismatic nature and the establishment of national parks and nature reserves.⁸¹ In this strand of environmentalism, nature is abstracted from human activities. The next strand he calls “the gospel of eco-efficiency.”⁸² This approach, Martinez-Alier argues, incorporates the frameworks of sustainable development and wise use approaches to resource management. Finally, he describes an “environmentalism of the poor.”⁸³ This strand incorporates environmental justice movements and sustainable dependencies between humans and nature in the Global South. He relates these strands to different structures of economic organisation. Through this lens it is possible to distinguish between multiple, conflicting, and complementary approaches in more regional or localised ways. Similarly, Patrick Bresnihan and Naomi Millner consider alternative histories of “environmentalism” that emerge within and through social justice movements.⁸⁴ This approach allows for a more equitable approach to the study of ideas of nature protection that includes wider understanding of “nature,” and a wider constellation of actors.

The emergence of an environmental discourse was neither universal nor equal between actors, landscapes, or countries but was facilitated by some common circumstances and features

⁸⁰ Joan Martinez-Alier, *The Environmentalism of the Poor: A Study of Ecological Conflicts and Valuation* (Northampton, MA: Edward Elgar Publishing, 2002).

⁸¹ Joan Martinez-Alier, *The Environmentalism of the Poor: A Study of Ecological Conflicts and Valuation* (Northampton, MA: Edward Elgar Publishing, 2002), 1.

⁸² Martinez-Alier, 5.

⁸³ Martinez-Alier, 10-14.

⁸⁴ Patrick Bresnihan and Naomi Millner, *All We Want Is the Earth: Land, Labour and Movements beyond Environmentalism* (Bristol: Bristol University Press, 2023).

which were also evident in the case of Ireland's peatlands. These included the significance of ecology and peatland ecologists in the development of an influential body of scientific research, the increasing prominence of international institutional collaboration of which Ireland was a participant, and the collision of local, national, and planetary concerns as part of wider understandings of nature.

Literature on Irish environmental governance comes largely from the social sciences.⁸⁵ The primary focus of this research concerns the imperfect or negligible influence of the transposition of EU environmental directives into Irish law. This analysis demonstrates the power dynamics within Ireland between different interest groups and stakeholders in the management of the non-human environment. These studies could benefit from greater consideration of the historical legacies of ideas of nature that inform Irish environmental governance today. While there has been some attention to the emergence of Irish environmental activism, this has largely concentrated on the proposed Carnsore point nuclear plant in the 1970s, and the Corrib Oil protests in the early 2000s.⁸⁶

While the literature surrounding wetland protection is limited, there have been some studies that consider the historical legacies that inform contemporary governance mechanisms. Wetland scientists Edward Matlby, for example, gives some historical context within a wider text

⁸⁵ Liam Leonard, ed., *The Sustainable Nation: Politics, Economy and Justice*, First edition, Advances in Sustainability and Environmental Justice, volume 21 (Bingley: Emerald Publishing Limited, 2018); Liam Leonard, *Green Nation: The Irish Environmental Movement from Carnsore Point to the Rossport Five*, vol. 2, Ecopolitics Series (Drogheda: Greenhouse Press, 2006); Bernadette Connaughton, *The Implementation of Environmental Policy in Ireland: Lessons from Translating EU Directives into Action* (Manchester: Manchester University Press, 2019); Hilary Tovey, *Environmentalism in Ireland: Movement and Activists* (Dublin: Institute of Public Administration, 2007).

⁸⁶ Leonard, *Green Nation*; Hilary Tovey, *Environmentalism in Ireland*.

about wise-use and wetland management.⁸⁷ He describes the changing historical attitudes to wetlands from wastelands to sites for nature protection. Historians Katja Bruisch and Liesbeth van de Grift consider the changing attitudes to wetland protection as part of a move away from drainage and the recognition of the negative ecological consequences of drainage in the late twentieth century.⁸⁸ Bruisch's details the emergence of a late-Soviet environmental wetland paradigm shift that was related to transnational and international environmental governance movements in a book chapter titled "How Wetlands Entered the Transnational Spaces of Late Soviet Environmentalism."⁸⁹ As well as these contributions, historian Anna-Katharina Wöbse is currently working on an RCC project titled, "Waterlogged and Drained: An Environmental History of European Wetlands 1950–2000."⁹⁰ Her research will be a promising contribution to the history of wetlands.

⁸⁷ Edward Maltby, "The Changing Wetland Paradigm," in *The Wetlands Handbook*, ed. Edward Maltby and Tom Barker (Chichester, UK; Hoboken, NJ: Wiley-Blackwell, 2009), 3–42.

⁸⁸ Katja Bruisch and Liesbeth Van De Grift, "3 Reclaiming the Land: The Drainage Paradigm and the Making of Twentieth-Century Rural Europe," in *Living with the Land*, ed. Liesbeth Van De Grift, Dietmar Müller, and Corinna R. Unger (De Gruyter, 2022), 37–60.

⁸⁹ Katja Bruisch, "How Wetlands Entered the Transnational Spaces of Late Soviet Environmentalism," in *Thinking Russia's History Environmentally*, ed. Catherine Evtuhov, IŪ A. Laĩus, and David Moon, *Environment in History: International Perspectives*, Volume 25 (New York: Berghahn Books, 2023), 201–23.

⁹⁰ Anna-Katharina Wöbse, Rachel Carson Centre. https://www.carsoncenter.uni-muenchen.de/fellows/sof/former_fellows/anna_katharina_woebse/index.html

Historian Stefania Barca points to the false nature/work dichotomy within histories of environmentalism, and environmental history more broadly.⁹¹ She calls for an “environmental history of work” that treats the experiences of workers as essential to narratives about systems of resource exploitation.⁹² This thesis therefore attempts to address this limitation in the literature through the extension of the conceptual limits of ‘nature’ to include sites of work, both productive and reproductive.

Any review of the historical scholarship on nature and labour must include a discussion of historian Richard White’s groundbreaking text *The Organic Machine*.⁹³ This book is a history of environmental damage in the Columbia River in Oregon in the United States. White applies an energetic perspective to understand the complex entanglements between nature and labour. Using energy as a lens, White details the flows of the river, the electricity produced by a dam on the river, different iterations of human labour that interact with the river, and the lifecycles of the salmon who live in the river. White argues that the lens of energy allows scholars to consider the human and non-human agencies that are acting simultaneously in history. He contends that the organisation of labour is a response to the material realities of nature. He takes this further by asserting that human labour is a part of nature. This approach is particularly useful for thinking about Ireland’s peatlands. Considering the contemporary tensions between so-called nature and labour, it is important to tease out the interdependencies and entanglements that existed at the sites of peat extraction and the ways in which this extraction impacted humans alongside the non-human environment.

⁹¹ Stefania Barca, *Workers of the Earth: Labour, Ecology and Reproduction in the Age of Climate Change* (London: Pluto Press, 2024).

⁹² Barca, 9.

⁹³ Richard White, *The Organic Machine* (New York: Hill and Wang, 1995).

Invoking White's *Organic Machine*, historian Gunther Peck details the scholarship in the years since its publication that considers this entanglement.⁹⁴ Peck goes on to develop a framework of a 'geography of labour.'⁹⁵ Through this framework, Peck illuminates the ways that nature extends to sites of work, including the home. Historian Thomas Andrews uses the framework of the 'workscape' to inform his more-than-human history of the coalfields in southern Colorado in the United States in the early twentieth century.⁹⁶ These approaches further extend to the productive and reproductive labour that occurs in domestic and community spaces. Beyond the limited considerations of labour as exclusively humans in productive work in mines or factories, this thesis will consider reproductive labour as it relates to peat consumption in Ireland.

IV. Thesis statement

Considering contemporary debates over peatland governance, this thesis develops a history of human-peatland entanglements in Ireland. The mobilisation of energy from peatlands was an essential component of Irish state-building in the twentieth century. In a newly independent country with limited resources, the government developed an energy system from a familiar fuel. This system was shaped by the physiological and ecological characteristics of peatlands, and beliefs about their value for subsistence and development. Peat provided an energetic pathway between traditional and modern ways of life. Industrial development, universal access to electricity, and regional development were made possible through the large-scale exploitation of nature.

⁹⁴ Gunther Peck, "The Nature of Labour: Fault Lines and Common Ground in Environmental and Labor History," *Environmental History* 11, no. 2 (2006): 212–238.

⁹⁵ Peck, 214.

⁹⁶ Thomas G. Andrews, *Killing for Coal: America's Deadliest Labor War* (Cambridge (Mass.): Harvard university press, 2008). This framework is used by historian Katja Bruisch in her upcoming work *Burning Swamps* to consider the dynamic sites of work in Russian peatlands.

The embeddedness of the peat energy system in Irish society meant that efforts to protect peatlands faced significant obstacles. It is not simply the case that the socio-cultural or traditional legacies associated with peat extraction and consumption in Ireland inhibited efforts at peatland protection. These factors played a significant role, certainly. But this thesis argues that the energetic entanglements between peat and Irish development in the twentieth century made it impossible to isolate the conservation of peat from the historical legacies of industrial development.

V. Approach and organisation

Structure and analysis

This research thematically approaches the question of the role of peatlands within wider Irish energy transformations, and the ecological implications of this transformation, in consideration of the parallel and intersecting dimensions of this history. Each chapter is organised around a different aspect of development. Within these chapters, the discourses, labour, and ecology of the different dimensions of peatland development shed light on the ideas of nature underpinning political and social organisation, as well as the more-than-human agencies informing these actions.

Chapter One explores the inputs, assumptions, and technologies that influenced the top-down construction of the industrial peatland imaginary through a discourse analysis. The chapter traces the origins of the industrial peatland imaginary from the perspectives of imperial administrators and engineers, and political and institutional actors within the government of the Irish Free State. This is a necessary starting point of analysis to reveal the ideological and institutional frameworks within which peatlands were mobilised as natural resources. It encompasses a timeframe between 1809 and 1946, ending with the establishment of Bord na Móna. While peat was framed as a national resource by the Irish government, the history of state interest in peatlands extended much earlier than this. In order to identify continuity and changes in attitudes and beliefs about peatlands,

this chapter identifies the Bogs Commissioners Report as a reasonable starting point. This was the first large-scale state-led attempt to rationalise and make Ireland's peat landscapes legible for productive use. Through analysis of colonial and national discourses, the legacies of improvement, development, ideas of the nation, and energy security that underpinned peatland development are demonstrated.

Chapter Two examines how the mobilisation of the industrial peatland imaginary transformed labour and nature at the sites of extraction. It considers the role of human and non-human agents as workers within the wider national energy system. Therefore, the experiences of workers and their relationships with peatlands as sites of extraction are centred. In order to understand how labour and nature were both important forces in shaping the Irish peat industry, changing systems of labour are considered. These are the peat harvest, the hand-won schemes, and, finally, industrial extraction. The timeframe of this chapter encompasses the recollections of informants to the folklore collection which includes memories that extend back to the nineteenth century. It concludes in the 1970s, when the primary frameworks of the Bord na Móna system of mechanised extraction were in place. It considers a range of actors, including workers, communities, individuals, institutions, engineers, and administrators. The chapter employs a comparative approach to trace the changing systems of work and demonstrate how these changes were informed by the workers themselves as well as the non-human environment.

Chapter Three considers the utilisation of peat fuel within systems of electricity generation. It demonstrates how the transformation of the materiality of peat enabled new geographies of energy consumption. This chapter also considers the ways that the infrastructure of electricity, and peat power in particular, reproduced geographically distinct outcomes between different kinds of rural space. In order to make visible these developments, pre- and post- independence discourses surrounding the technologies of peat power and developmental potential of electricity generation are analysed. The chapter develops two case studies of the development of power stations in the midlands and the west of Ireland to demonstrate the different development outcomes in these two cases. This chapter considers the ways that the material culture of power development reinforced

the spatial division of regions in Ireland through mapping and infrastructure development. The timeframe of this chapter begins with imperial discourses about using peat for electricity generation in the early twentieth century. It continues up to the 1990s with a reflection on the closure of the power stations.

Chapter Four considers the end uses of peat energy, in particular, the consumption of peat as a domestic fuel. It examines the socio-cultural position of peat within the Irish home as an historically and nationally significant fuel. The chapter examines national political and cultural rhetoric and myth-making alongside the material realities of domestic labour. It contrasts these histories with the mid-century transition towards new domestic imaginaries and how the peat industry responded to the new expectations and demands of consumers and the wider energy market. This chapter begins in the nineteenth century and extends to the 1990s in order to demonstrate the persistence of peat as a domestic fuel despite competition from other fuel sources. It includes the perspectives of national political and literary figures, institutional actors including engineers and administrators, industrial media, as well as women in the home.

Chapter Five examines the increasingly diverse meanings and values applied to peatlands in the mid to late twentieth century, in particular the contributions of peatland ecologists to a new conservation paradigm. This chapter reexamines the question of the resource imaginary in the context of increasing pressure from ecological and global influences. It traces the relationship and interdependencies between ecology and industry and how this relationship framed efforts to conserve peatlands. It also considers the impact of Bord na Móna's Third Development Programme in the 1970s and the subsequent renewed salience of peat extraction in response to the energy crisis. This chapter covers a period from the 1930s to the 1990s and includes the perspectives of peatland ecologists and conservationists, state and institutional actors, as well as international networks of scientists and industrialists.

This thesis takes as its end point the early 1990s when significant shifts in environmental governance, corporate restructuring, and emergent discourses around carbon emissions generated new peatland entanglements in Ireland. Among these, the transposition of the 1992 EU Habitats

Directive and BNM's organisational transformation in the late 1980s and early 1990s deserve significant attention. While acknowledging these important changes, it was ultimately decided that the period from the 1990s onwards was beyond the scope of this thesis and should form the basis for future research.

Primary sources

Since this thesis is primarily concerned with discourses and the production and reproduction of beliefs and attitudes about the non-human environment, as with any historical research, primary sources are at the heart of this analysis. Taking the approach of environmental history, this thesis looks for the interactions, relationships, and entanglements between humans and the non-human environment in the sources. These sources include manuscripts and archival materials, periodicals, books and pamphlets, folklore, oral histories, maps and other visual materials.

Government Materials (Archival and Digital)

Part of this research is focused on understanding the role of 'the state' in the industrial exploitation of peatlands. Therefore, it is important to examine the complex constellation of state bureaucracies which were concerned with peat and peatlands. These materials make visible the priorities and agendas of the architects and administrators of the industrial peat energy system. These top-down sources shed light on the multidimensionality of the state as well as the limitations or constraints on these departments in the execution of their policies. These sources reveal political and colonial ideas of nature and resources.

Materials from the Departments of Industry and Commerce, Taoiseach, and External Affairs/Foreign Affairs from the collections of the National Archives of Ireland are incorporated in this work. Further political and administrative perspectives are found in Dáil debates, Programmes for Government (White Papers), and Irish Statutes. Various historical and contemporary

government agencies are also relevant to this research. These include An Foras Forbartha, An Foras Talúntais, and the National Parks and Wildlife Service. Materials from these organisations were primarily accessed online. In relation to the acquisition and transfer of lands, The Land Commission played a significant role in the history of peatlands development. Unfortunately, these records are not accessible, and so particular attention was paid to any reference or correspondence to the Land Commission that emerged in other materials. Considering the geographical scope of this research, some local government records are also incorporated where possible. This includes archival materials from the Kerry County Archives.

This research links Irish state policy to its colonial precursors and considers the inherited legacies, beliefs and values embedded in state policies. British reports, research papers, and maps therefore significantly inform this thesis. While much of this material was available online, a significant amount was accessed in the National Library of Ireland. This includes the maps and reports of the Bogs Commission.

Institutional and Corporate Materials

The two major institutions under consideration in this research are the Turf Development Board/Bord na Móna and the Electricity Supply Board. While these both function in some respects as extensions of the state, they both also operate with specific interests and objectives related to their functions. Analysis of their governing principles and actions reveal the ways that they acted in opposition to the state or to each other, as well as the ways in which they provided an institutional legitimacy to state objectives. These semi-state companies also significantly contributed to wider societal fossil resource imaginaries through their advertising and publicity campaigns.

While these are both semi-state companies, their organisational structures necessitate a separate research approach beyond classical governmental archives. ESB materials come primarily from the ESB archives and the ESB digital collections. Bord na Móna's collections have been in transition for the duration of this research. Therefore, official BNM materials have been collected

from a range of alternative sources. BNM's Annual Reports and Accounts are digitised and publicly available through the Oireachtas website. Long-serving managing director C.S. Andrews' private papers in the Political Archives in University College Dublin also contain miscellaneous reports and publications from the company. His autobiography, *Man of No Property* has also been used for this research.⁹⁷ Papers presented by BNM staff and management at International Peat Congresses have been collected from the Early Printed Books Collection of the Library of Trinity College as well as the Greifswald Peatlands Library. Finally, miscellaneous publications are included from online and archival collections. While these sources combined provide significant insight into the operations and perspectives of actors within BNM and the company overall, it is assumed that materials from BNM's own collection would be valuable for future research.

Underrepresented Voices

This thesis is not simply a top-down history of the development of the Irish peat industry. It instead demonstrates the constellation of participants within the peat energy system. These include workers, communities, and women of the house.⁹⁸ These perspectives shed light on the day-to-day experiences of ordinary people and their entanglements with the non-human environments in which they lived and worked. Examining energy systems through these perspectives makes visible the industrial and domestic labour that was central to energetic, social, and economic transformations.

⁹⁷ C. S. Andrews, *Man of No Property*. (New York: Lilliput Press, 2011).

⁹⁸ The term "women of the house" is applied by historian Catriona Clear. Clear defines this category as "any woman who is seen to be in charge of certain functions within a house, those who do the organisation and performance of its everyday nurturing and recreational functions." in *Women of the House: Women's Household Work in Ireland, 1926-1961: Discourses, Experiences, Memories*, Women in Irish History Series (Portland, OR: Irish Academic Press, 2000), 12. This category will primarily be used. Occasionally "housewife" will be applied in specific contexts.

To make these actors visible, a diverse range of source material is analysed. Periodical sources have proven particularly useful. These include newsletters produced for workers by the Turf Development Board and BNM. *An Sleán* is available in the Early Printed Books Collection of the Library of Trinity College and *Scéal na Móna*, is incorporated from a number of archives including the National Library of Ireland, The Andrews Papers in the UCD Political Archive, as well as the Greifswald Peatlands Library. Newsletters produced by the ESB include *REO News* and *ESB News*, both available from the ESB Archives. Journals from women's associations *The Irish Housewife Association* and *The Irish Countrywoman's Association* are also included. These periodicals are valuable for identifying the concerns and experiences of workers within specific institutions, as well as the experiences and demands of Irish women.

To identify peoples' experiences of the historical practices and traditions related to peat extraction and consumption in rural Ireland, existing oral histories form a considerable part of the research of this thesis. This includes the Manuscript and Schools Collections of the National Folklore Collection in University College Dublin. These are supplemented with the digitised collections of the archive.⁹⁹ Furthermore, the 'Bord na Móna Collection' of the Irish Life and Lore, Oral History archive are examined.¹⁰⁰ A final source of oral history interviews is the Kitchen Power collection, collected by SORCHA O'BRIEN.¹⁰¹ These kinds of sources help to generate an impression of the realities of people's experiences within Irish society, as economic and social changes were transpiring. And, while the positionality of interviewees within the contexts of the interviews must be considered to shape their memories and recollections, these sources are nonetheless essential.

Local histories also provide insights into the materialisation of development and energy projects in more regionally specific contexts. While there is a question of the academic rigour with

⁹⁹ Dúchas, University College Dublin, 2010, <https://www.duchas.ie>.

¹⁰⁰ Irish Life and Lore, <https://www.irishlifeandlore.com/>

¹⁰¹ Kitchen Power, <https://www.museum.ie/en-ie/collections-research/folklife-collections/kitchen-power/kitchen-power-online>

which these works are produced, as indicators of memory and beliefs, they are valuable sources. They particularly contribute the experiences of actors outside the parameters of the state and the ways in which state objectives were mediated in specific ways and through negotiations between human and nature. Similarly, biographical and literary sources reflect the cultural and social experiences of human-nature entanglements while also speaking to the contexts of their production.

Scientists, Engineers, Academics

Academic discourses are central to the construction or subversion of popular resource imaginaries throughout this thesis. Researchers in the natural sciences, ecology, chemical and mechanical engineering all contributed to knowledges about peatlands. These perspectives can be found in multiple collections. The digital collections of the Royal Dublin Society and the Royal Irish Academy are valuable repositories for tracing continuity and changes in peat discourses. The International Peat Congress Proceedings also provide valuable insights into advances in peat extraction, conversion, utilisation, and ecology. These sources provide not only an insight into the progress of scientific knowledge throughout the course of this history, but further demonstrate the interrelatedness between scientific production and the state.

Visual Materials

Peatlands are physical, tangible ecosystems that have been subject to multiple means of visual representation throughout their history. These kinds of materials add another dimension of not only richness and experiential engagement for this research, but also as historical artifacts in their own right. Photography, diagrams, sketches, advertisements, and stills from film are incorporated to develop a more holistic understanding of peatland developments and the concurrent socio-cultural and economic transformations in Ireland.

Maps are invaluable sources for this study. As tools of governance, they have been used to spatially rationalise complex social and ecological formations, and this was particularly applied in the progression of the peat industry. As geographical phenomena, peatlands have lent themselves to mapping and surveying and these objects demonstrate colonial legacies, social and economic histories of landscape use, and visions of industrial futures for Irish planners.

Chapter One

“A great new industry being born before their eyes”

Visions of Peatland Development

I. Introduction

“... there is no reason why our response to the challenge of our wastelands, our soggy seventh, should not produce settled, prosperous and happy communities. In fact, these are already there, because those of us who work in turf are confident in ourselves, and in the nation.”¹⁰²

Writing in 1953 in the newly established journal of the Institute of Public Administration, C. S. Andrews, who had by then served seven years as managing director of Bord na Móna (The Irish Turf Board), reflected on the deep feelings that the subject of peat evoked in Irish people. These feelings, he wrote, could on the one hand be nostalgic and romantic while on the other induce aversion to the backwardness and unsophisticated work and conditions associated with the bogs. These emotional associations were informed by the everyday lived experiences of rural communities, he argued. But they also shaped the challenges which had to be overcome by those who had worked for and believed in the successful outcome of a prosperous peat industry for the Irish nation. Andrews had been part of the state apparatuses responsible for the development of

¹⁰² C. S. Andrews, “Turf - A Myth?” *Administration* 1 (1953), 39. UCDA P91/49, Papers of Todd Andrews, UCD Archives, University College Dublin Library, Ireland.

Irish peatlands since the 1930s. “These attitudes and these feelings,” he wrote, “...do not help to create the psychological climate necessary to establish a large industry.”¹⁰³

The development of Irish peatlands, then, required more than a consideration of their material characteristics or their prominence in the Irish landscape. Andrews recognised that a significant part of the process of peatland development necessitated a national revaluation of peat as a natural resource. Andrews was articulating a characteristic of resources that social geographer Gavin Bridge argues is fundamental to understanding systems of exploitation.¹⁰⁴ The materiality of a resource in and of itself is not sufficient to account for the emergence of extractive industries. Bridge argues that resources are “part physical entity, part social category.”¹⁰⁵ As humans ascribe value to parts of the non-human environment, they become resources. Therefore, the mobilisation of large-scale peat extraction in Ireland in the twentieth century was not simply the result of political interest or infrastructural development by the state, but also a long history of human-nature entanglements that generated an industrial peatland imaginary.

The production of this imaginary was not limited to the discourse of Irish political elites like Andrews in the post-independence state. It was informed by a long history of resource-making that had begun in Gaelic Ireland, as evidenced by reference to the bogs in Gaelic law texts.¹⁰⁶ Indigenous communities’ interactions with peatlands through extraction and burning for domestic heat and light imbued them with a value that influenced social and cultural developments, and ultimately formed part of their governance of the natural world.

The potential of these landscapes to provide material benefits engaged the interests of British colonial elites who observed local practices and absorbed these landscapes within their

¹⁰³ Andrews, 38.

¹⁰⁴ Bridge, “Material Worlds.”

¹⁰⁵ Bridge, 1219.

¹⁰⁶ Feehan and O’Donovan. *The Bogs of Ireland*, 3.

civilizing mission for Ireland.¹⁰⁷ They believed that the bog wilderness could be tamed and made useful in service to the Empire. This process of elite-driven value-making intensified in the nineteenth century as ideas for the large-scale development of Ireland's bogs began to occupy space within greater visions for the improvement and industrialisation of Ireland. These visions continued to morph and evolve through the establishment of the Free State and into the policies of the Irish Republic. Peatlands thus provide an important lens through which to understand the ways that resources were mobilised by the state in Ireland as part of national visions of development, with the inherited legacies of colonial resource-making.

In his definition of *developmentalism*, historian Kenneth Pomeranz situates the relationship between humans and their physical environments at the centre of state-building narratives.¹⁰⁸ This framework explores how the language of social improvement or development is mobilised by political elites to justify extractive practices for the consolidation of territorial, political, and economic power. In the case of Ireland's peatlands, and the Irish state more broadly, there was a continuity of beliefs about the value and potential of peatlands that endured from the pre-independence era and manifested in the language and policies of political actors with very different objectives.

The concept of the 'imaginary' has been applied to Irish resources by historians of Ireland's energy systems. Historian Esa Ruuskanen, for example, considers the production of a socio-technical peatland imaginary in Ireland in the late eighteenth and early nineteenth century.¹⁰⁹ His research informs the framing of this chapter, wherein the elite constructions of imagined

¹⁰⁷ Helen O'Connell, "The Nature of Improvement in Ireland," in *Nature and the Environment in Nineteenth-Century Ireland*, ed. Matthew Kelly, The Society for the Study of Nineteenth-Century Ireland (Liverpool: Liverpool University Press, 2019): 16–34.

¹⁰⁸ Kenneth Pomeranz, "Introduction," in *The Environment and World History*, ed. Edmund Burke and Kenneth Pomeranz, The California World History Library 9 (Berkeley: University of California Press, 2009): 3–32.

¹⁰⁹ Ruuskanen, "Encroaching Irish Bogland Frontiers."

futures for Irish peatlands are considered. Furthermore, historian Sorchá O'Brien applies the concept of the 'imaginary' to isolate the forces contributing to representations of the Irish nation through the visual and material culture of the Shannon Scheme.¹¹⁰ It is with this scholarship in mind that this chapter develops a history of the origins and features of the Irish industrial peatland imaginary.

This chapter is an analysis of top-down rhetoric and knowledge production with regard to peatlands in Ireland. It explores imperial attitudes about the value of the bogs, nationalist rhetoric about national resources, and the discourse and actions of decision-makers within the government of the Irish Free State. The term 'elite' is used throughout to distinguish the actors involved from ordinary people. Elite here implies political or administrative power. The chapter explores the political and economic contexts framing the emergence of elite beliefs. Peatland development was part of wider narratives about progress and improvement as a means to overcome the perceived constraints imposed by the materiality of the bogs themselves.

The industrial exploitation of peatlands was framed in nationalist terms in the post-independence context at its inception and throughout its existence in the twentieth century. This chapter argues, however, that the knowledge and values informing this framing were inherited from and in response to colonial discourses and research. This chapter will show how and why the Irish government in the 1930s chose to situate peat at the heart of its state-building project. This was influenced by a long history of human-nature entanglements and policy choices at the elite level that ultimately led to the establishment of Bord na Móna in 1946.

II. Irish peatlands within the British Empire

¹¹⁰ O'Brien, *Powering the Nation*.

Peatlands were a geographical and geophysical challenge to the consolidation of power in Ireland from the Anglo-Norman invasion of the twelfth century. Given their dominance in the landscape, they were impossible to ignore. They provided shelter and protection from military attack for Irish people as their materiality as swampy, waterlogged terrains was difficult for invading forces to navigate. In 1685, William King described peatlands as “a shelter and refuge to Torgs, and thieves.”¹¹¹ These landscapes were thus associated with the kind of wildness that English, and later British imperial, actors ascribed to the practices and places of Ireland with which they were unfamiliar. This was part of the civilising mission used to justify conquest.¹¹²

Underlying British engagements with Irish people and places, was the principle of *improvement*. This was a mindset or attitude about the ways in which Ireland could be physically and socially remade and assimilated into the Empire.¹¹³ This process reflected the intellectual and technological capacities of the time and conflated humans and nature in Ireland as being uncivilised and wild. As mainland Britain was experiencing rapid, fossil-fuelled industrialisation, the technocratic spirit of this development was exported to Ireland. ‘Improvers’ recommended the application of scientific and moral values to agriculture, social life, and education.¹¹⁴ Part of this logic was a judgement about the worthlessness of Irish nature and culture. This judgement was extensively applied to peatlands.

This discussion of the position of peatlands within colonial projects of improvement builds upon Ruuskanen’s research.¹¹⁵ He argues that the mapping, surveying, and application of drainage techniques by imperial actors in Ireland between 1770 and 1840 led to the production of a socio-

¹¹¹ William King, “Of the Bogs, and Loughs of Ireland by Mr. William King, Fellow of the Dublin Society, as It Was Presented to That Society.,” *Philosophical Transactions of the Royal Society of London* 15, no. 170 (1685), 952.

¹¹² Feehan and O’Donovan. *The Bogs of Ireland*. 1996, 37-40.

¹¹³ O’Connell. “The Nature of Improvement.”

¹¹⁴ O’Connell, 26.

¹¹⁵ Ruuskanen, “Encroaching Irish Bogland Frontiers,” 22–40.

technical peatland imaginary. Within this imaginary, extensive drainage and the development of transport infrastructure were envisioned to materially transform the bogs into productive agricultural landscapes. This practice of intensive drainage was called *reclamation*, wherein the hydrology of previously unsuitable land would be transformed to facilitate pasture, crops, or forestry. Ruuskanen further argues that this kind of knowledge-production allowed the geographical extent of the empire to reach the marginal landscapes of Ireland's peatlands. He thus describes peatlands as "agricultural frontiers" of the British Empire.¹¹⁶

In order to demonstrate the modalities of improvement with regard to peatlands, the writings of William King and Arthur Young are presented. Speaking to the Dublin Society in 1685, William King, who would go on to become Archbishop of Dublin in 1703, declared that "if want of industry has in our remembrance made one Bog; no wonder if a country, famous for laziness, as Ireland is, abound with them."¹¹⁷ While King spent considerable time in this address reflecting on the afflictions and shortcomings of the Irish peasantry, he was ultimately calling for greater administrative and scientific attention to be paid to Irish peatlands. He recommended the production of information related to the drainage and utilisation of peatlands for agricultural development. King's conflation of peatlands and people was representative of the process of othering and dehumanisation, which propelled invasion and intervention. He claimed that "the inconveniencies of these Bogs are very great; a considerable part of the Kingdom being rendered useless by them."¹¹⁸ This rhetoric was typical of attitudes to peatlands in Ireland as the British

¹¹⁶ Ruuskanen, "Encroaching Irish Bogland Frontiers," 28-29.

¹¹⁷ The Dublin Society was a branch of the Royal Society; Philip O'Regan, "William King," Dictionary of Irish Biography, October, 2009, <https://www.dib.ie/biography/king-william-a4573>; King, "Of the Bogs," 948-9.

¹¹⁸ King, "Of the Bogs."

Empire was expanding.¹¹⁹ Since agricultural production was an imperative for the state, the existence of vast tracts of ‘useless’ land in Ireland was an obstacle to development.

Further evidence of this perspective can be found in agricultural writer Arthur Young’s 1776 *Tour of Ireland*.¹²⁰ Young, through the investigation and observation of agricultural production in Ireland, was impressed by the vastness of the peatlands of Ireland. He noted the “vast wild and impenetrable mountain and bog.”¹²¹ He similarly commented on the expanse of the Bog of Allen, calling it “the great bog of Allen ... of considerable extent.”¹²² Young was significant in contributing to a perspective that peatlands could be materially transformed in order to serve a new purpose, in this case agricultural. He argued that they were “exceedingly improveable [sic].”¹²³ As well as this, the abundance of peatlands that Young observed meant that this transformation could be materially and spatially significant. The scale of the extent of peatlands in tandem with new agricultural methods imbued peatlands with a potential new value.

Ruuskanen points to the significance of both King and Young in contributing to the formation of the *wasteland* narrative with relation to Irish peatlands. The useless, unproductive, and worthless attributes associated with bogs were a necessary condition for improvement.¹²⁴ This association of wasteland also implied wilderness, that is, landscapes that were devoid of human activity. As Ruuskanen argues, Young in particular relied on a conscious ignorance of the indigenous Irish people, for whom the bogs provided shelter and fuel.¹²⁵ Literary scholar Derek Gladwin further argues that the wasteland narrative helped to “advance a larger aim”, that is, “to dispossess the Irish

¹¹⁹ Ruuskanen. “Encroaching Irish Bogland Frontiers,” 26.

¹²⁰ Arthur Young, *Arthur Young’s Tour in Ireland (1776-1779)*, ed. Hutton Wollaston (London: George Bell & Sons, 1892).

¹²¹ Young, 246.

¹²² Young, 468.

¹²³ Young, 468.

¹²⁴ Vittoria Di Palma, *Wasteland: A History* (New Haven and London: Yale University Press, 2014).

¹²⁵ Ruuskanen, “Encroaching Irish Bogland Frontiers,” 27–28.

peasants and generate profit from bogs.”¹²⁶ In this reading, peatlands functioned as a potential avenue for greater colonial control in Ireland.

Young’s recommendations proved influential in the nineteenth century. The Act of Union (1801) centralised the governing authority of Ireland in Westminster. As a result, scholars contend, the role of the colonial state in Ireland increased significantly.¹²⁷ Literature on this period particularly emphasises the expansion of the bureaucratic function of British administration, with a concurrent rise in government reports and surveys produced.¹²⁸ Historian Niall Ó Ciosáin argues that although the production of research and materials related to the citizenry and functioning of Ireland was already in progress prior to this period, the theoretical expansion in democratic participation as a result of the formal union necessitated a new kind of political legitimacy that the state sought through increased knowledge production and wider dissemination of its findings.¹²⁹

The implication of this for peatlands was increased administrative interest in their drainage and agricultural development. This focus led to an elite-level reimagining of these landscapes through survey, quantification, and intervention. This spatial rationalisation was part of a longer history of the extension of colonial power in Ireland. For example, as part of the Down Survey in 1655, Ireland had been extensively mapped and surveyed for the valuation of lands seized from Catholic

¹²⁶ Derek Gladwin. *Contentious Terrains: Boglands, Ireland, Postcolonial Gothic*. (Cork: Cork University Press, 2016), 65.

¹²⁷ Virginia Crossman, ‘The Growth of the State in the Nineteenth Century,’ in James Kelly, ed., *The Cambridge History of Ireland* (Cambridge: Cambridge university press, 2018), 542–566.

¹²⁸ Historian Niall Ó Ciosáin writes, “the 1820s and 1830s saw the introduction of a centralized professional police force, a national system of local law courts, a system of primary education funded and controlled by the state, a state body for infrastructural investment, the Board of Works, and a national system of poor relief.” In Niall Ó Ciosáin, *Ireland in Official Print Culture, 1800-1850: A New Reading of the Poor Inquiry* (Oxford: Oxford University Press, 2014), 3.

¹²⁹ Ó Ciosáin, 9.

landowners that would then be redistributed to English soldiers.¹³⁰ In the nineteenth century, however, the objectives were more focused on the productive capacity of the landscape. In this way, peatlands were understood conceptually as both wastelands *and* potential landscapes of abundance.¹³¹

The expansion of state bureaucracy, as well as the resource crisis initiated by the pressures of the Napoleonic Wars (1803-1815), concentrated the attention of the state towards extensive peatland development.¹³² Within the context of industrial growth in England and the advancements made possible there by the exploitation of fossil energy, the idea that peatlands could be improved found enthusiasm from actors within the power structures of the British government as well as among Anglo-Irish elites.¹³³ The potential for the bogs of Ireland to be drained to provide arable land for the growth of necessary crops like hemp and flax in support of the Empire's military endeavours was an attractive prospect. Therefore, in 1809, a parliamentary act established a Bogs Commission that was tasked with extensively surveying Ireland's peatlands to assess their productive potential.¹³⁴

The Commission hired ten engineers who, over the duration of four years, conducted an extensive survey of peatland coverage on the island of Ireland, reporting on their spatial extent, material composition, and depth.¹³⁵ These engineers developed strategies for reclamation and

¹³⁰ Thomas Aiskew Larcom, *The History of the Survey of Ireland Commonly Called The Down Survey* by Doctor William Petty A.D. 1655-6. (Dublin: The University Press, 1851).

¹³¹ Ruuskanen. "Encroaching Irish Bogland Frontiers," 25.

¹³² Arnold Horner. "Napoleon's Irish Legacy: The Bogs Commissioners, 1809-14." *History Ireland* 13, no. 5 (2005), 24.

¹³³ Horner. "Napoleon's Irish Legacy," 24.

¹³⁴ Horner, 25.

¹³⁵ Bogs Commission, *The First Report of the Commissioners Appointed to Enquire into the Nature and Extent of the Several Bogs in Ireland and the Practicability of Draining and Cultivating Them*. (London: House of Commons, 1810); *The Second Report of the Commissioners Appointed to Enquire into the Nature*

proposed drainage works for the conversion of the bogs to agricultural land. They were also instructed to project the costs of these interventions. As a starting point, the island of Ireland was divided into various districts. These districts laid out a geographical template that distinguished certain regions in Ireland according to their proportion of peatlands. Each engineer was assigned one or more districts to survey. They were further instructed to survey peatlands of exclusively 500 acres or more and to delineate boundaries between peatlands and other types of landscape clearly.

The surveys initially focused on the midlands, including the bog of Allen but over the course of the Commission's work, this boundary was extended to encompass counties west of the Shannon and in the North. This movement westward from the capital reflected not only the spatial challenges of accessing these farther territories but also reflected a socio-geographical bias on the part of colonial administrators. The geographical distribution of the survey is shown in figure 1.1. In total, the engineers produced sixty-four maps and detail drawings as well as four written reports.

The language of the reports exemplified the improvement mindset. Richard Griffith, the engineer responsible for surveying a significant portion of the bog of Allen, outlined the ways in which human intervention in peatlands was essential for large-scale agricultural development. He wrote,

“..it is not supposed that an active people will thus suffer Nature, unassisted, slowly to obtain a desirable alteration in the upper surface of draining Bogs; they will naturally join hand in hand with her; and by the simple process of digging or ploughing up the surface of the drained Bog, and by gathering it into heaps and (in dry weather) setting fire to them, (having previously mixed a portion of clay amongst the heaps, which is always to be found

and Extent of the Several Bogs in Ireland and the Practicability of Draining and Cultivating Them. (1811); The Third Report of the Commissioners Appointed to Enquire into the Nature and Extent of the Several Bogs in Ireland and the Practicability of Draining and Cultivating Them. (1814); The Fourth Report of the Commissioners Appointed to Enquire into the Nature and Extent of the Several Bogs in Ireland and the Practicability of Draining and Cultivating Them. (1814). National Library of Ireland, Ir 63131 i 8.

in inexhaustible quantities beneath the Bog) accomplish in two years, what Nature, unassisted, might have attained (less perfectly) in ten.”¹³⁶

In this reflection, Griffith revealed how the process of improvement was imagined as an interaction between the sometimes opposing and sometimes complementary forces of human innovation and nature itself. And, even where naturally occurring processes were recognised as being progressive towards the same ends as the Commission’s, the rate at which they were occurring was not deemed satisfactory. The actions Griffith was describing - ploughing, burning, mixing clay with peat - all involved a material intervention and transformation of the peatland. In this way, improvement required manipulating and reconstructing characteristics of the non-human environment.

¹³⁶ Richard Griffith, *The First Report*, 8.



Figure 1.1 Map of Ireland overlaid with maps Bogs Commission map showing the geographical extent of the surveys. Dr Louis Gilet, RePEAT project, Trinity College Dublin, 2024.

Since draining the bogs was the objective of the Commission, the engineers devoted significant attention to this process. They paid particular attention to hydrology and the ways that flows of water on peatlands could be either diverted or manipulated. This is clear in figure 1.2 which shows a section of engineer John Longfield's map of the Fifth District which encompassed

part of County Offaly, then King's County.¹³⁷ In this map, as in all the map's, proposed drainage was indicated by the inclusion of broken red lines across the peatlands. Longfield proposed a system of drainage across the bog that emanated from Lough Boora, a lake in the centre. Longfield identified that the gradient of the surrounding peatlands was such that the lake was “the great receiver for all the surface water of the surrounding Bogs.”¹³⁸ The position of this lake thus informed his recommendations for drainage systems.



Figure 1.2 Section of showing the proposed system of drainage as well as cutaway bog (bottom right quadrant). John Longfield, *Map of District Number Five*, 1811. Courtesy of National Library of Ireland.

The variations in naturally occurring geological and hydrological features shaped the engineers' proposals. The lack of uniformity in peatlands within and across districts and regions

¹³⁷ John Longfield, *A Map of District no. Five*, 1811. NLI 16 D.20.

¹³⁸ John Longfield, *The Second Report*, 119.

meant that no universal system of reclamation could be adopted. This was clearly articulated in the *Second Report*. The Commissioners wrote,

“we are fully aware, and our Engineers seem equally impressed with the opinion, that it is impossible to lay down any general system of drains which could be accurately followed in every instance; local circumstances must always be attended to; the different degrees of wetness of Bogs, the varieties in their texture affecting the degree of tenacity with which they retain water, the form of the surface giving different falls for the drains, and many other particulars must be taken into consideration; and every plan, however perfect in general, must arrange itself according to them.”¹³⁹

This demonstrates that, although the Bogs Commission was initiated as a means through which to transform and control the non-human environment, and subsequently extract economic value from peatlands, the material realities of these peatlands shaped and constrained this objective.¹⁴⁰

While primarily dedicated to documenting features of the non-human environment, human agencies were visible in both the maps and reports of the Bogs Commission. The authors included frequent references to settlement, turbary peat extraction, general economic activities, and agricultural labour. For example, in figure 1.2, cutaway bog is shown in the lower right of the image. This indicated human activity with the extraction of peat for domestic use by the local population. These observations complicated the portrayal of peatlands as wild, empty places. Although, the language used to describe the activities of communities at the sites of peatlands reflected King’s earlier remarks about Irish lack of intelligence and work ethic.

¹³⁹ Bogs Commission, *The Second Report*, 12.

¹⁴⁰ Historian Caroline Kreysel discusses the more-than-human agencies acting in opposition to the Bogs Commission in her Masters’ thesis, “Underneath the Bog: An Inquiry into Peatland Drainage in Ireland in the Early Nineteenth Century” (Masters, Dublin, Trinity College Dublin, 2022).

The occurrence of these communities on boglands posed a challenge to elites. For example, in the Commission's *Third Report*, J.A. Jones, reporting on the region of Lough Corrib in County Galway wrote,

“on the edges, and in some of the islands in these bogs, are numerous and very populous villages, and although there is but little tillage in comparison, on account of the great quantity of rocky ground adjoining, very little has been done by the tenants in the way of improvement. This is principally owing to the want of encouragement, by their getting only short leases, [etc.]; were the peasantry duly encouraged to promote agriculture, they would yearly reclaim several acres of these bogs, which are so well circumstanced for improvement, by spending that time at it, which is so frequently occupied in annual emigrations.”¹⁴¹

Jones' observations and recommendations spoke to the nature of state intervention in the early nineteenth century and the belief that the indigenous rural communities who lived on the fringes of the mapped peatlands could be encouraged into productive labour. The principles of improvement could then also be applied to people in this case. Jones' excerpt also highlights the concerns of colonial planners at this time over the levels of emigration from Ireland.

Following the production of the maps and reports, the project was ultimately abandoned. This was due to the war on the Continent coming to an end, as well as the projected costs and questions of land access and ownership. The work of the Bogs Commission had a legacy far beyond its initial inception. It provided a blueprint for a new kind of landscape to replace Ireland's peatlands.¹⁴² As Esa Ruuskanen argues, the Commission was significant in shaping an imperial socio-technical imaginary that envisioned dynamic landscapes drained and converted to agricultural land, traversed by canals, supplying food for mainland industrialisation.¹⁴³ Furthermore, the maps and reports of the Bogs Commission demonstrated not just the objectives of the governing structures of Ireland at that time, but also their attitudes and beliefs about the value

¹⁴¹ J.A. Jones, *The Third Report*, 130.

¹⁴² Ruuskanen, “Encroaching Irish Bogland Frontiers,” 32.

¹⁴³ Ruuskanen, 33.

of peatlands and nature more broadly. The process reflected what historian James Scott describes as the ways that states rationalised and standardised the natural world in order that it could be more easily controlled and thus made economically productive.¹⁴⁴

While the Bogs Commission was successful in its construction of an agricultural peatland imaginary, the focus shifted in the mid-nineteenth century towards the industrial potential of peat as a fuel source. Academic organisations like the Royal Irish Academy and the Royal Dublin Society provided an important forum for academic and scientific discourse at this time. In a series of successful lectures to the RDS, chemist Robert Kane demonstrated how scientific knowledge-making could contribute an alternative value to peatlands. Kane, despite being a catholic and a member of the United Irishmen, had gained a favourable reputation as a chemist in imperial scientific institutions through his groundbreaking research on compounds of ammonia in the first decades of the nineteenth century.¹⁴⁵

In 1844, he published his lectures in a comprehensive volume titled *The Industrial Resources of Ireland*.¹⁴⁶ In this work, Kane outlined the energetic potential of Ireland's natural resources. Within the text, he included an overview of hydropower, as well as coal. But he also advocated for peat as a source of fossil energy with the potential to transform Ireland from an agriculturally based economy to an industrial one.¹⁴⁷ While he specifically invoked and incorporated the maps and reports of the Bogs Commission in his work, he expanded upon their interpretation of the value of peatlands. According to Kane, "our bogs may become, under the influence of an enlightened energy, sources of industry eminently productive. It is a fuel of

¹⁴⁴ James C. Scott, *Seeing like a State: How Certain Schemes to Improve the Human Condition Have Failed*, Yale Agrarian Studies (New Haven: Yale University Press, 1998).

¹⁴⁵ William J. Davis, "Robert Kane," in Charles Mollan and Royal Irish Academy, eds., *Irish Innovators in Science and Technology* (Dublin: Royal Irish Academy, 2002), 100–101.

¹⁴⁶ Robert Kane, *The Industrial Resources of Ireland* (Dublin, Hodges and Smith, 1845).

¹⁴⁷ Kane. *Industrial Resources*.

excellent nature.”¹⁴⁸ He situated peatlands within a wider discourse about fossil fuel-driven industrialisation by explicitly invoking the coal-driven industrialisation that was occurring in mainland Britain at the time.¹⁴⁹

In this text, Kane developed a new framework for the articulation of the value of peatlands. By isolating peat fuel as a valuable component of peatlands and then further isolating the chemical components of peat fuel, Kane introduced a system of valuation that utilised the material components of peatlands. Through explicit comparisons with wood and coal, Kane made a case for the industrial use of peat. He was concerned with the density of peat and its constituent carbon, nitrogen, hydrogen, and ash. In particular, the concept of ‘calorific power’ had significant implications in Kane’s work. The calorie unit was becoming the standard measure of the heat energy produced by burning fossil fuels. Its usage in industrial development meant that different types of fuel could be compared. Kane identified that “the calorific power of dry turf is about half that of coal.”¹⁵⁰ He included the caveat that the high water-content of peat fuel meant that this figure was subject to great variation.

While he moved beyond previous conceptions of peatlands as agricultural frontiers, Kane’s work nonetheless relied on the language of improvement as well as contemporary advancements of technology to present a peatland imaginary wherein peat extraction could be mechanised. He wrote, “there is in our bogs amassed a quantity of turf, which, if the peculiar characters of that fuel be suitably attended to, may become of eminent importance to the country.”¹⁵¹ The introduction of machinery into peatlands would, he argued, facilitate the compaction of peat into briquettes to improve its calorific value, and turf charcoal could be used for industrial purposes. Kane’s text presented a vision of peatlands as a place where untapped resources could allow for “national self-

¹⁴⁸ Kane, 30.

¹⁴⁹ Kane, 162.

¹⁵⁰ Kane, 38.

¹⁵¹ Kane. Industrial Resources, 43-4.

sufficiency.”¹⁵² Considering Kane’s participation in the 1798 rebellion, as well as his continued work towards Catholic emancipation during his academic career, his idea of ‘national self-sufficiency’ complicates purely colonial considerations of the peat resource imaginary during this period.¹⁵³

What is particularly significant about Kane’s contribution to the peatland discourse was that he framed peat as having a social function as well as an economic one. He suggested that peatlands could be as an arena in which to address unemployment and underdevelopment. He believed that these social problems were within the purview of the state’s responsibility. He wrote, “in other countries it has been the most anxious care of Government, and of those intrusted with the superintendence of education, to ascertain the nature and amount of their means of promoting industry and extending the employment of the people.”¹⁵⁴ Kane presented a vision of a self-sufficient Ireland through the industrialisation of peatlands.

The advent of famine in 1845 tested the capacity and willingness of the British state to address social problems in Ireland. The trajectory of government responses to the Famine illuminated the priorities and limitations of the colonial bureaucracy in Ireland. Relief programmes for victims were delivered with varying levels of enthusiasm by the British administration. Despite some initial measures, the majority of interventions were ultimately withdrawn as public opinion and government policy reverted to preexisting beliefs about the character and deservedness of the Irish poor.¹⁵⁵

In *The Industrial Resources of Ireland*, Kane had advocated for more significant interventions by the British government to alleviate poverty and improve living conditions for the

¹⁵² Ruuskanen. “Encroaching Irish Bogland Frontiers,” 36.

¹⁵³ Davis, “Robert Kane,” 100–101.

¹⁵⁴ Kane. *Industrial Resources of Ireland*, vi.

¹⁵⁵ Peter Grey, ‘The Great Famine, 1845 – 1850,’ in James Kelly, ed., *The Cambridge History of Ireland*, vol. 3 (Cambridge (GB): Cambridge university press, 2018), 656.

poor. He spent time during the Famine as part of a relief committee, advising the government on disease outbreaks which were occurring concurrently to the widespread famine conditions.¹⁵⁶ Despite these actions, by the end of the Famine the state's unwillingness to invest in Ireland was clear. While Kane was successful in outlining an industrial peatland imaginary, its implementation was limited by the realities of the time.

The fatal consequences of Britain's non-intervention during the Great Famine which left over a million people dead, with a million more emigrating, accelerated political opposition to the legitimacy of British rule in Ireland. This manifested in the popular resistance of the Land League and subsequent pressure for Home Rule. Attentions to peatlands by political or academic elites was somewhat diminished in the face of rural dissent and unrest. The Land Act of 1891 and the Wyndham Act of 1903 legislated a mass transference of land ownership through funding provided directly to tenants or via the newly established Congested Districts Board.¹⁵⁷ Considering the ambitions of the Bogs Commission had been in part curbed by the complexity of land access and ownership, this new legislative framework surrounding the Land Question encouraged a renewed engagement in the question of peatland development.

William Kerr illustrated this point in the preface to his 1905 work *Peat and its Products*. "The subject [Irish peat development]", he wrote, "now that the Irish land difficulties have been relieved and that we have lately had bitter experience of a coal famine, is ripe for serious discussion and practical consideration."¹⁵⁸ As well as the Land Question, Kerr's statement spoke to other external pressures which were motivating a renewed interest in peat during this period. Strikes in English and Westphalian coal mines in the 1870s and 1889 respectively had alerted

¹⁵⁶ Davis, "Robert Kane," 100–101.

¹⁵⁷ Terrance Dooley, 'Irish Land Questions, 1879 – 1923,' in Brendan Smith et al., eds., *The Cambridge History of Ireland*, vol. 4 (Cambridge; New York, NY: Cambridge University Press, 2018), 133–134.

¹⁵⁸ W.A. Kerr, *Peat and Its Products* (Glasgow: Begg, Kennedy & Elder, 1905): vii.

administrators to the precarity of singularly relying on coal as a fossil fuel.¹⁵⁹ William Kerr was a former British soldier and recipient of the Victoria Cross for valour in battle in India in 1857.¹⁶⁰ In the late nineteenth and early twentieth century, he was part of a growing discourse surrounding the potential development of Irish bogs.

During this period, several publications on the composition, formation, drainage, fuel capacity, and the electricity-generating potential of peat, were produced by a cohort of industrial capitalists, engineers, and university professors.¹⁶¹ These texts reflected a growth-oriented perspective within the emerging fossil economy and an opportunistic outlook on the profitability of investment in peat. For instance, within this discourse, questions of the development of a stable market of consumers for peat and peat products were given the same weight as questions of the viability and efficiency of peat as a fuel source. As well as this, in these texts, the responsibility of the state to invest in large-scale peat energy projects was outlined alongside small-scale entrepreneurial peat works. Furthermore, these peat industrialists utilised existing research and

¹⁵⁹ Donal Clarke. *Brown Gold: A History of Bord Na Móna and the Peat Industry in Ireland*. (Dublin: Gill & Macmillan, 2010), 14-15.

¹⁶⁰ “William Alexander Kerr V. C.,” The Victoria Cross and George Cross Association, Accessed 21 September 2023, <https://vcgca.org/our-people/profile/1018/William-Alexander-KERR>

¹⁶¹ Kerr, *Peat and Its Products*; Hugh Ryan, “Reports upon the Irish Peat Industries: Part 1,” *The Economic Proceedings of the Royal Dublin Society* 1, no. 10 (1907): 371–420; Hugh Ryan, “Reports upon the Irish Peat Industries: Part 2,” *The Economic Proceedings of the Royal Dublin Society* 1, no. 13 (1908): 465–546; Thomas Tomlinson, “Peat as Gas Engine Fuel, New Developments,” in *Institution of Electrical Engineers* (Dublin, 1912): 1 - 27; Thomas Tomlinson, “The Production of Power from Peat,” *Journal of Proceedings of the Institution of Electrical Engineers* 40, no. 187 (1908): 106–11; Thomas Tomlinson, *The Cost of Getting and Drying Peat with Special Reference to Its Use in Power Production* (Dublin, for the author: John Falconer, 1909); Thomas Tomlinson, *A Proposed Experiment in Cheap Peat-Fuel-Winning for Power Purposes* (Dublin, for the author: John Falconer, 1913).

technological developments from other peat-extracting countries in Europe with whom they developed networks of expertise.

Writing in 1907, Hugh Ryan, at the time a professor of chemistry at University College Dublin, demonstrated a progressive perspective on the increasing use of fossil fuels and the industrial development of energy. He claimed, “the provision made by the human race for one of its greatest necessities – a fuel supply – has varied from time to time with the conditions of its environment, and with the progress of its civilisation.”¹⁶² His statement mirrored an earlier claim by William Kerr, that “life in Northern latitudes implies the free use of fuel.”¹⁶³ Not only were academic and administrative elites looking to peat from within a new system of land ownership and governance, but also with a perspective on the use of fossil fuel that implied abundance and exponential growth as a means to fulfil a kind of socio-cultural prosperity. Social progress was thus linked to economic and industrial growth and the increased use of fossil energy.

A belief in the regenerative properties of peatlands bolstered extractive practices for industrial actors. Writing in 1905, Kerr claimed,

“worked-out coal fields, exhausted oil wells, and shale deposits, are worse than useless. Not so with peat bogs. When the decayed dense bottom peat has been cut away to within three feet of the pan, if a layer of surface sphagnum be placed upon this moist bed the bog will grow again. This renovation of peat bogs is feasible, and the deposit renews itself in a comparatively short space of time. Thus the exhaustion of our peat bogs becomes an impossibility.”¹⁶⁴

In this way peat overcame the limitations of other fossil fuels in the industrial imaginary – the raw material could be extracted and after some human intervention, new peat would grow.

Concurrent to the growing industrial discourse, fuel scarcity experienced during the First World War motivated the British Department of Scientific and Industrial Research to establish a

¹⁶² Ryan, “Reports upon the Irish Peat Industries: Part 1,” 371.

¹⁶³ Kerr, *Peat and Its Products*, xi.

¹⁶⁴ Kerr, 118.

Fuel Research Board.¹⁶⁵ The Board assigned a group of experts to investigate peat as an industrial fuel. This included engineer John Purser Griffith, Hugh Ryan, mechanical engineer Pierce Purcell, electrical engineer and member of the Department of Agriculture and Technical Instruction George Fletcher, and chemist Sydney Young. The actions of this group intensified transnational cooperation and information-sharing with regards to the mechanisation of the peat industry.

In 1918, the Board presented a report called *The Winning, Preparation, and Use of Peat in Ireland*.¹⁶⁶ This document was heavily influenced by existing research into Ireland's peatlands, in particular the Bogs Commission maps and report which provided a spatial baseline for inquiry. The key recommendations of the report, based on extensive scientific research, investigations into the peat industries of other nations, and historical data, were that machine-cutting and electric power generation were the most economically viable interventions into bog landscapes.¹⁶⁷ The authors of the report were successful in further expanding the socio-technical peatland imaginary.

Continuity of older imperial priorities were evident in the report's recommendations of investment in peatland drainage for agricultural purposes, with agriculture being described as "Ireland's greatest and most important industry."¹⁶⁸ The narrative of peatlands as wastelands in need of improvement can be found throughout the report, highlighting a continuity of beliefs about the ultimate value of these landscapes for actors within the administration of the imperial state. However, the Board broadened its vision to a more dynamic use of peatlands. They insisted that the constraints they identified with peat development, that is, labour costs, transport, climate

¹⁶⁵ Clarke. *Brown Gold*, 15.

¹⁶⁶ Great Britain Fuel Research Board (hereafter FRB). Irish Peat Inquiry Committee, and John Purser Griffith. *The Winning, Preparation, and Use of Peat in Ireland; Reports and Other Documents*. (London: Published for the Dept. of Scientific and Industrial Research by H.M. Stationery Off, 1921).

¹⁶⁷ FRB et al. *The Winning, Preparation, and Use of Peat in Ireland*, 46-47.

¹⁶⁸ FRB et al., 35.

conditions, and low calorific value, could all be largely alleviated through mechanisation of the cutting and drying process in tandem with the establishment of power stations adjacent to the bogs.

The Board further suggested that the scale of peatland development necessitated a state-level approach. This would allow, they argued, for efficiency, a more streamlined approach to drainage, as well as the authority to legislate for the compulsory purchase of land. This issue had consistently constrained visions of peat development since the report of the Bogs Commission. But, like the recommendations of Bogs Commission before it, the recommendations of the Fuel Research Board were not implemented.

Despite the production of scientific and technological research, as well as articulations of dynamic visions of agricultural and industrial improvement, peat landscapes during British rule were inhibited by a predominantly laissez-faire approach to industrial and economic development in Ireland. This lack of material interventions contributed to the mobilisation of the Irish nationalist movement. From the 1870s, Irish republicans formed a coherent nationalist consciousness around the issue of Irish Home Rule.¹⁶⁹ Questions of land use and ownership, and resource sovereignty, were evident in the rhetoric of nationalist elites and imbued national resources with an ideological importance.¹⁷⁰ As Kane and others had demonstrated, peatlands held significant potential for industrial and economic independence. In fact, the abundance of research available by the early twentieth century on the viability of Ireland's peatlands as repositories of energy made it clear to actors within the Irish independence movement that imperial governance was not sufficient to fulfilling Ireland's development potential.

This perspective can be seen in the rhetoric of Pádraig Mac Piarais, who succinctly articulated the attitude of Irish nationalists towards the best use of Ireland's resources. In 1913 he wrote,

¹⁶⁹ Robert F. Foster, *Modern Ireland: 1600-1972* (London: Penguin Books, 1989), 415-421.

¹⁷⁰ Philip Bull. *Land, Politics and Nationalism: A Study of the Irish Land Question* (Dublin: Gill & Macmillan, 1996); and Gladwin. *Contentious Terrains*, 55-90.

“Ireland has resources to feed five times her population: a free Ireland would make those resources available. A free Ireland would drain the bogs, would harness the rivers, would plant the wastes, would nationalise the railways and waterways, would improve agriculture, would protect fisheries, would foster industries.”¹⁷¹

In Mac Piarais’ vision, progress for Ireland included reclamation of peatlands, echoing the recommendations of the Bogs Commission. These “wastes” would be planted in an independent state. In this excerpt, Pearse was, as historian Helen O’Connell argues, articulating a vision for Ireland that utilised “the structure and vocabulary” of the improvement discourse.¹⁷² Concurrent with the calls for the mobilisation of peatlands to fulfil Ireland’s industrial promise, beliefs about the cultural significance of peatlands to Irish identity introduced a tension within the economic independence narrative.¹⁷³

Peatlands were crucial for the domestic consumption of Ireland’s rural poor and these rural entanglements with peatlands shaped social and cultural life. These very entanglements had been the basis of early improvers’ racialised justification for reclamation projects. Peatlands, their materiality, and the labour associated with them was foregrounded in representations of Irish culture through the collective works of the Gaelic League. This organisation that was founded in 1893 to codify an Irish literary tradition that was rich in meaning, history, and importantly in the Irish language.¹⁷⁴ Historians of the League emphasise the influence of this literary and cultural movement on political and military resistance.¹⁷⁵ The League was focused on an intellectual

¹⁷¹ Pádraig Mac Piarais. *From A Hermitage*. The Bodinstown Series No.2. (Dublin: Irish Freedom Press, 1915), 180.

¹⁷² O’Connell. “The Nature of Improvement,” 34.

¹⁷³ Gladwin. *Contentious Terrains*, 75.

¹⁷⁴ Timothy G. McMahon, *Grand Opportunity: The Gaelic Revival and Irish Society, 1893 - 1910*, Irish Studies (Syracuse, NY: Syracuse University Press, 2008), 2.

¹⁷⁵ Fearghal McGarry, ‘Revolution, 1916 – 1923,’ in Brendan Smith et al., eds., *The Cambridge History of Ireland*, vol. 4 (Cambridge; New York, NY: Cambridge University Press, 2018), 262.

mission in service of distinguishing Gaelic culture as its own coherent entity as well as the development of a Gaelic rural imaginary that was resistant to industrial modernity and urbanisation.¹⁷⁶ Actors within the League therefore reappropriated Irish folklore, customs, and mythology. Peatlands represented a point of tension between industrial development and traditional culture in nationalist rhetoric.

Despite this tension, the idea that Britain was actively impeding the development of the Irish peat fuel industry took root in political debate. Laurence Ginnell, then a Sinn Féin Member of Parliament, raised this issue in the House of Commons in 1915.¹⁷⁷ He claimed that British coal merchants were receiving favourable treatment in a bid to dampen the development of the Irish peat fuel industry. Ginnell was given assurance by the Chief Secretary for Ireland that “the development of the Irish peat industry has not ... been in any way prevented in the interests of British coal owners.”¹⁷⁸ Despite this assurance, a series of correspondences between Ginnell and The Department of Agricultural and Technical Instruction for Ireland contained increasing levels of antagonism.¹⁷⁹ In 1917, Ginnell wrote,

“the hostility of the Department has not wavered for ten years, only pretends to waver now to humour you, has taken care not to consult or seek information from any Committee, and is so notoriously an agency for the protection of the British coal interest against peat that we could not venture to trust it to test any of our experiments.”¹⁸⁰

¹⁷⁶ The works of the Gaelic League is discussed in greater detail in Chapter Four.

¹⁷⁷ Pauric J. Dempsey and Shaun Boylan, “Laurence Ginnell,” *Dictionary of Irish Biography*, October, 2009, <https://www.dib.ie/biography/ginnell-laurence-a3488>

¹⁷⁸ “Parliamentary Debates,” dated December 14, 1916. NAI, 92/2/1418. National Archives of Ireland.

¹⁷⁹ NAI, 92/2/1418.

¹⁸⁰ Laurence Ginnell, “Utilization of Irish Bogs,” dated February 22, 1917. NAI, 92/2/1418.

Within the mechanisms of British governance, Ginnell and others were thus invoking peatlands as a point of objection to that very governance.

The question of Ireland's resources permeated nationalist political writing. In 1919 Robert Lynd, in his treatise on Irish nationalism, wrote "what the average Nationalist has always desired above all things is a workable constitution, a resident Parliament, and the liberty to solve his national difficulties, develop his national resources and express his national genius."¹⁸¹ This framing was also evident in the First Democratic Programme which stated, "it shall be our duty to promote the development of the Nation's resources, to increase the productivity of its soil, to exploit its mineral deposits, peat bogs, and fisheries, its waterways and harbours, in the interests and for the benefit of the Irish people."¹⁸² These texts demonstrate that the value of peatlands was understood through the lens of the years of imperial research and surveys. Rhetoric surrounding Irish resources co-opted the peatland imaginary that had been developed but repackaged it as a national imperative.

The entanglements between British and Irish visions of peat development were perhaps most evident in the 1921 *Report on Peat*.¹⁸³ This study was commissioned by the First Dáil in 1919 to generate a comprehensive overview of the peat resources of Ireland for the revolutionary government. Professor Hugh Ryan, who had been a part of the British Fuel Research Board, was the leading investigator. Despite Ryan's associations with the BFRB, he was highly critical of the earlier report, although it included similar recommendations for the utilisation of peatlands.¹⁸⁴

¹⁸¹ Robert Lynd. *Ireland a Nation*. (New York: Dodd, Mead and Company, 1920), 68.

¹⁸² Houses of the Oireachtas, "DEMOCRATIC PROGRAMME. – Dáil Éireann (1st Dáil)," text, January 21, 1919, Ireland, <https://www.oireachtas.ie/en/debates/debate/dail/1919-01-21/15>. The First Dáil was a parliamentary organisation of Irish nationalists, led by the Sinn Féin party which had won a majority in national elections, see Foster, *Modern Ireland*, 494-497.

¹⁸³ Clarke, *Brown Gold*, 17.

¹⁸⁴ Clarke, 17.

Ireland's bogs posed a challenge to elites in the nineteenth and early twentieth centuries. The physiological characteristics of peat and peatlands shaped and constrained visions of progress and modernisation. Attitudes and beliefs about bogs during this period were impacted by the fluctuating political, economic, and ideological contexts. As contested landscapes on a contested island, these "wastelands" offered new imaginaries of self-sufficiency and industrial promise. Engineers, surveyors, and scientists influenced imperial attitudes through material engagement with these environments, and this knowledge was co-opted by Irish political activists who imbued it with nationalist sentiment. During the War of Independence (1919-1921) and the Irish Civil War (1922-1923), peatlands provided a backdrop to the military activities of the time.¹⁸⁵ As landscapes, they functioned as sites of ambush and execution, and as burial grounds for disappeared victims.¹⁸⁶ Despite these traumatic associations, the industrial peatland imaginary, which had been established prior to the revolutionary period, would ultimately carry through into the administrations of the Irish Free State.

III. Energy sovereignty in the Irish Free State – building the frameworks

Pro-Treaty leaders assumed power in Ireland in 1922. In 1923 they formed the Cumann na nGaedheal political party and their administration led the first government of the Irish Free State until 1932. The conditions of the Anglo-Irish Treaty and the partition of Northern Ireland were at the forefront of the political discourse. The administrators of the fledgling state were faced with

¹⁸⁵ Derek Gladwin, "Topobiographical Inquiry: Lived Spaces, Place-Based Experiences, and Ecologies," *Éire-Ireland* 55, no. 1–2 (2020): 129–49.

¹⁸⁶ See Andy Bielenberg and Pádraig Óg Ó Ruairc, "Shallow Graves; Documenting and Assessing IRA Disappearances during the Irish Revolution 1919 - 1923," *Small Wars & Insurgencies* 32, no. 4–5 (2021): 619–41; and Anne Dolan, "Death in the Archives: Witnessing War in Ireland, 1919–1921*," *Past & Present* 253, no. 1 (November 1, 2021): 271–300.

significant challenges for economic development for were poverty, unemployment, and diminishing social supports.¹⁸⁷ Demilitarisation contributed to rates of unemployment.¹⁸⁸ The critical feature of the Irish economy at this time was a cautious economic policy that sought to prove Ireland's capacity to self-govern responsibly through fiscal conservatism.¹⁸⁹ The legislative and administrative apparatuses of the state were almost entirely inherited from the pre-independence era.¹⁹⁰ The state's vision for Irish prosperity lay in rural development, redistribution of land, support of dairy and cattle farming, and a laissez faire approach to the economy.¹⁹¹ Energy policy developed within a post-independence context marked by colonial legacies and economic constraints. Agricultural production for export became a key priority of government operatives and rural electrification was seen as a means to develop this sector.¹⁹²

Historian Sorcha O'Brien argues that the establishment of large-scale energy infrastructure in the nascent Irish Free State was a crucial mediator of ideological, political, and developmental

¹⁸⁷ Anne Dolan, describing the conditions in Ireland following the Civil War, writes, "there was to be no 'land for the people' as the revolution once promised, and with bad harvests, falling prices and near famine conditions in the west, the memory of the wartime agricultural boom mocked this independence all the more." In Anne Dolan, 'Politics, Economy and Society in the Irish Free State, 1922 – 1939,' in Brendan Smith et al., eds., *The Cambridge History of Ireland*, vol. 4 (Cambridge; New York: Cambridge University Press, 2018), 323.

¹⁸⁸ Michael McCarthy, *High Tension: Life on the Shannon Scheme*, 1st ed (Dublin: Lilliput Pr, 2004), 16–18.

¹⁸⁹ Andy Bielenberg. *An Economic History of Ireland Since Independence*. Routledge, 2016, 9-11.

¹⁹⁰ John Biggins, Muiris MacCarthaigh, and Colin Scott, "Greening the Irish State: Early Legislative and Administrative Dynamics," *Irish Political Studies* 39, no. 2 (April 2, 2024): 187–205.

¹⁹¹ Mary Daly. *Industrial Development and Irish National Identity, 1922-1939*. Syracuse University Press, 1992, 11.

¹⁹² Gerard McCann. "Protectionism and the 'Economic War' in Interwar Ireland." *Journal of European Economic History* 43, no. 3 (September 2014): 39–68; and James Francis Meenan. *The Irish Economy since 1922*. (Liverpool: Liverpool U.P, 1970).

pressures.¹⁹³ O'Brien points to expressions of Gaelic authenticity and culture in the 1920s that were deemed a necessity for the legitimization of a hard-won political authority. This was conveyed in visual and material culture that harkened to Celtic roots. Visions for a nation-wide system of electricity production and distribution required massive state investment and had to be framed in nationalist terms.

The example of the Shannon Scheme (1925 – 1929) sheds light on the ways in which energy policy and state-building were intertwined in the early Free State.¹⁹⁴ It further demonstrates the contribution of the Cumann na nGaedheal administration to an institutional framework for the implementation of this energy policy. The scheme was a large-scale engineering project that was designed to harness the power of the Shannon River and provide electricity for Ireland, particularly rural agricultural communities. A key actor in the development of the State's electrification scheme was Irish engineer Thomas McLaughlin, who had gained experience working for the Siemens-Schuckert electricity company in Berlin in the early 1920s.¹⁹⁵ His experiences in Germany had impressed upon him the value of state-level electricity projects and, in particular, the potential of hydropower to this end.

Debates surrounding the scheme presented Cumann na nGaedheal with the challenge of effectively conveying their message about the value of a national electrification scheme and the benefits of utilising a national resource. For his part, alongside critical involvement in the planning and design of the scheme, McLaughlin published a book advocating for the project which was

¹⁹³ Sorcha O'Brien, "National Identity and Electrical Technology in 1920s Ireland: Balancing Forces of Essentialism and Epochalism," in *Powering the Nation*, 8–40.

¹⁹⁴ Andy Bielenberg, ed., *The Shannon Scheme: And the Electrification of the Irish Free State* (Dublin: Lilliput Press, 2002).

¹⁹⁵ Maurice Manning and Moore McDowell. *Electricity Supply in Ireland: The History of the ESB*. (Dublin: Gill and Macmillan, 1984), 20.

widely distributed and well received.¹⁹⁶ In this book, McLaughlin framed the Shannon Scheme within a moral argument about the imperative of energy production as a condition of independence. In McLaughlin's vision, Ireland had to look beyond England to the evidence and experiences of other countries in designing a national power system. He wrote,

“... the only national policy is a policy from home resources. That national policy which has had for its inspiration a simple imitation of English ideas and an intolerance of any other ideas cannot continue. A State has to be built up on a national policy suitable to that State, using the experience of all lands, being wedded to none but selecting what is best from all.”¹⁹⁷

The Shannon Scheme was, for McLaughlin, not simply a means through which to fulfil a vision of national development, but also a pathway to decoupling from British ideological and policy legacies.

Despite these efforts, the political opposition expressed anxieties about the social impacts of modernisation. Farmer's Party T.D. Michael Heffernan articulated these concerns,

“we are an essentially conservative people and are slow to avail of opportunities of that kind. It appears to me that it will take a considerable amount of education, and I should say

¹⁹⁶ An article in the *Irish Independent* which reviewed McLaughlin's book wrote, “as a piece of advocacy of the Shannon Scheme this is a well compiled and reasoned production.” The article goes on to state, “He [McLaughlin] maintains that the only method of bringing electricity to the farm is through a national network such as is proposed under the Shannon scheme.” in “The Shannon Scheme and Its Possibilities,” *Irish Independent*, May 25, 1925.

¹⁹⁷ Thomas McLaughlin, *The Shannon Scheme Considered in Its National Economic Aspect and in Regard to the Market for Electricity with Particular Reference to Electrical Development in Other Lands* (Dublin: The Sackville Press, 1925), 8. ESB Archives.

of propaganda, to prove to the people of this country that a saving is likely to come to them from the use of electricity as well as an improvement in their present living conditions.”¹⁹⁸

Heffernan’s remarks demonstrate the deep-rooted associations at the time of modern development with urban and continental values. His remarks further show the work that was required beyond the material construction of the project in convincing the public of its value.¹⁹⁹ Misgivings also existed amongst the political opposition that the project was too costly, that employing the expertise of Siemens-Schuckert would intensify political tensions with Britain, and that fisheries would be irreparably disturbed.

In response, Cumann na nGaedheal actors situated the Shannon Scheme and the harnessing of the power of the Shannon River, within a wider narrative about sovereignty. They framed the project as the inherent next stage in Ireland’s struggle for self-determination. The strength of this approach was clear in a statement by Independent T.D. Darrell Figgis in support of the scheme. He observed, “the power resources of this country will have to be carefully and economically conserved if the country is to take its place ultimately and rightly, as it should, amongst modern industrial nations.”²⁰⁰

Electric modernity was thus framed as the birthright of the Irish Free State. *The Irish Independent*, a national newspaper with Cumann na nGaedheal affiliations at the time, published an anonymous letter to the editor in 1925 which imbued the scheme with an historical importance and touted its social benefits for the people of Ireland,

¹⁹⁸ Michael Heffernan speaking in Houses of the Oireachtas. “Dáil in Committee. - Shannon Electricity Bill, 1925—Second Stage. – Dáil Éireann (4th Dáil)” text, May 5, 1925. Ireland. <https://www.oireachtas.ie/en/debates/debate/dail/1925-05-05/64>

¹⁹⁹ O’Brien, *Powering the Nation*, 33.

²⁰⁰ Darrell Figgis speaking in Houses of the Oireachtas. “Dáil in Committee. - Shannon Electricity Bill, 1925—Second Stage. – Dáil Éireann (4th Dáil)” text, May 5, 1925. Ireland. <https://www.oireachtas.ie/en/debates/debate/dail/1925-05-05/64>

“sir- many of your correspondents express pessimistic views regarding the Shannon scheme. Before the European war the country was in favour of Home Rule because under it we would have control and could develop our national resources, but now that we have a national Government many critics have begun to lose faith. Surely if we have no confidence in our own Government we can scarcely deserve to have one. In Limerick City numbers are idle. The majority of those men, as well as their comrades in Dublin, Cork, and elsewhere, fought on all the battlefields of the world-war for the rights of small nations. Now they are fighting for existence. We have a Government desirous of finding work for them, but those who are not, like those men, looking for their next meal and meals for their children want to prevent that work from coming their way. I sincerely hope that Mr. McGilligan and his colleagues, who have stood firm up to the present, will continue to do so to the end. Those men, and men of other counties, are waiting anxiously from day to day for the work of the Shannon scheme to start.”²⁰¹

Within its claims about national sovereignty, this letter also spoke to the promise of employment underpinning the overall ambitions of the scheme and the inherently political nature of this infrastructure project. Throughout the construction phase of the project, approximately 5000 men were employed, somewhat fulfilling the state’s responsibility to invest in employment.²⁰² Despite the quantitative success of the employment figures, historian Michael McCarthy argues that qualitatively, the experiences of workers throughout the duration of the Shannon Scheme were far from ideal. Accidental deaths, injuries, and poor conditions beset the construction of the Scheme.²⁰³

Historian Thomas Hughes argues that electrification schemes of the early twentieth century were in many ways an exercise of political power wherein choices about supply and distribution were instilled with ideological biases.²⁰⁴ This was evident in the choices and actions surrounding the Shannon Scheme. Cumann na nGaedheal used their political legitimacy to imbue electricity

²⁰¹ “Shannon Scheme: The First Bill Today?” *Irish Independent*, April 30, 1925.

²⁰² Michael McCarthy, ‘How the Shannon Scheme Workers Lived,’ in Andy Bielenberg, ed., *The Shannon Scheme*, 51.

²⁰³ McCarthy, 48–72.

²⁰⁴ Hughes. *Networks of Power*.

generation with national importance, as well as setting a precedent for state intervention in this sector of the economy despite their otherwise economically conservative leanings. The Shannon Scheme represented a more developmentalist approach that pursued state intervention for progressive social outcomes including increased employment and reduced emigration.

Following attempts to attract private interest to invest in the distribution of electricity, it became clear to Cumann na nGaedheal that the State was the only actor with the capacity and motivation to provide this public good.²⁰⁵ The Shannon Scheme thus set a precedent for the Irish state to invest in large energy projects. This interventionist function was institutionalised through the establishment of the Electricity Supply Board in 1927.²⁰⁶ This Board was a semi-state company whose remit was both electricity generation and distribution. Emerging, as it did, following significant intra-government coordination and negotiation, the ESB operated with its own managing structure but with state financial and operational oversight.

These actions by the Cumann na nGaedheal government in the early days of the Irish Free State were important in framing a national discourse around the importance of energy policy and natural resources for Ireland's future. As well as this, the construction of a national energy institution and a large energy project became a blueprint for future administrations. According to historian Lothar Schoen, the Shannon Scheme was "a fundamental act of nation-building"²⁰⁷ In this way, the institutionalisation of the state's values surrounding energy infrastructure established a framework within which future administrations could attach their own ideas and beliefs about the

²⁰⁵ Lothar Schoen. "The Irish Free State and the Electricity Industry, 1922-1927." In *The Shannon Scheme*, 42-47.

²⁰⁶ Manning and McDowell. *Electricity Supply in Ireland*, 70.

²⁰⁷ Schoen, "The Irish Free State and the Electricity Industry," 47.

nation's resources.²⁰⁸ The Shannon Scheme and the establishment of the ESB set a precedent for sweeping state interventions in the energy sector, albeit with hydropower and not peat.

IV. The peat *crusade*

Speaking in the Dáil in 1930, Seán Lemass, then a vocal opponent of the sitting administration and founding member of the Fianna Fáil political party, insisted, “until the system of using the land is altered so that more employment can be provided on it and until industries have been started that will give occupation to the surplus population on the land, we are likely to have these periods of depression recurring quite frequently, and relief votes being passed here in order to deal with them.”²⁰⁹ It is clear from Lemass's statement that despite the employment opportunities provided by the Shannon Scheme, Ireland did not escape the impacts of the global depression in the 1930s. Unemployment and conditions of poverty led to a decrease in public support for the Cumann na nGaedheal government and in 1932, Fianna Fáil came to power with the support of the Labour party.²¹⁰

Led by the outspoken anti-Treatyite Éamon de Valera, this administration was marked by a renewed emphasis on the development of peat resources as a solution to a variety of the problems of state-building. These included unemployment, emigration, energy sovereignty, and industrialisation. Peat policy was embedded in a wider ideological framework that was

²⁰⁸ Environmental law and policy scholar Sinead Mercier makes this case as a model for contemporary state-led energy transitions in her article “Ireland's Energy System: The Historical Case for Hope in Climate Action,” *New Labour Forum* 30, no. 2 (2021): 21–30.

²⁰⁹ Seán Lemass speaking in Houses of the Oireachtas, “ORDERS OF THE DAY. - The Adjournment—The Economic Situation. – Dáil Éireann (6th Dáil),” text, November 19, 1930, Ireland, <https://www.oireachtas.ie/en/debates/debate/dail/1930-11-19/51>.

²¹⁰ Daly, *Industrial Development and Irish National Identity*, 59-60.

developmentalist in nature and supported state intervention for the protection of domestic industry and goods. Fianna Fáil leaders were influenced by the contemporary global trend towards protectionism that was emerging in other countries.²¹¹ There was also a desire to decouple as much as possible from economic dependency on Britain.

One of de Valera's first actions was the cessation of the payment of Land Annuities to Britain with the intention of keeping Irish money in Ireland. This resulted in a retaliatory withholding of imports to Ireland, notably coal. Historian Mary Daly suggests that some disagreement existed within Fianna Fáil as to the key priorities of the administration.²¹² Using the example of this 'economic war,' she suggests that national sovereignty was more important to de Valera than economic repercussions. Meanwhile, for newly appointed Industry and Commerce Minister Seán Lemass, the restrictions on the import of industrial goods constrained his vision for Ireland's industrial development. Lemass positioned the Department of Industry and Commerce at the heart of government policymaking and encouraged the establishment of the new economic order that advocated state-ownership of industries where, as Daly argues, "social goals predominated over profitable possibilities."²¹³

Ireland in the 1930s experienced rising unemployment as a consequence of both the global depression and Ireland's economic war with Britain. The global depression, commencing with the Wall Street Crash in October 1929, had a significant impact on the fledgling Irish Free State whose economy was so intrinsically linked with the United States and Britain. Emigration to these countries, which had historically been an option for job seekers in Ireland, was significantly reduced. And while the Cumann na nGaedheal government had imposed trade barriers in response to this economic crisis, in 1932 the incoming Fianna Fáil government were more pronounced in

²¹¹ Gerard McCann, "Protectionism and the 'Economic War' in Interwar Ireland.," *Journal of European Economic History* 43, no. 3 (September 2014), 57.

²¹² Daly, *Industrial Development and Irish National Identity*, 62-63.

²¹³ Daly, 65.

their policies. They advocated for protectionist economic policies and an emphasis on the development of native Irish industry.²¹⁴

At the beginning of the FF administration, uncertainties about the exact figures of unemployment were debated in the Dáil and in the press. Data released from the Department of Industry and Commerce showed an increase in the number of people who were registered as unemployed between 1930 and 1932 from 22,623 to 31,374.²¹⁵ And while these figures highlight the upward trend of unemployment, they obscure its full extent with people often failing to register officially as unemployed. Minister Seán Lemass claimed that as many as 80,000 people were unemployed in Ireland in 1932.²¹⁶ People affected most significantly by unemployment were tradespeople and builders in towns and cities, and those living in rural western counties such as Galway, Mayo, Sligo, and Kerry.²¹⁷

Emigration to the United States was also brought to a standstill during the early 1930s. Between the years 1926 and 1931, the number of people emigrating to the U.S. was an estimated 18,800. From 1932 to 1939, this fell to an estimated 700.²¹⁸ The realities of unemployment and emigration were invoked in political rhetoric to the advantage of the Fianna Fáil party in developing the narratives of the promise of industry and the industrial development of peatlands.

Although in broad agreement about self-sufficiency, protectionism and economic nationalism, tensions existed within Fianna Fáil about the ultimate vision for Ireland.²¹⁹ De Valera

²¹⁴ McCann, "Protectionism and the 'Economic War.'"

²¹⁵ *Leitrim Observer*, June 4, 1932.

²¹⁶ *Irish Press*, June 6, 1932.

²¹⁷ 'Unemployment in the South.' *The Liberator* November 11, 1932.

²¹⁸ J. Peter Neary and C. Ó Gráda. 'Protection, Economic War and Structural Change: The 1930s in Ireland.' *Irish Historical Studies* XXVII. No. 107. 199, 299.

²¹⁹ Daly. *Industrial Development and Irish National Identity*, 59-74.

envisaged a return to a romanticised, traditional way of life.²²⁰ For Lemass, modernisation and industrialisation were the ultimate aspirations. These conflicting visions speak to the complexity of identifying a universal peatland imaginary within Fianna Fáil. Some actors within the party, in particular Minister for Defence Frank Aiken, were convinced of the economic and social value of the bogs and demonstrated a continuity with the improvement perspective that could only see the bogs as wastelands in need of development.

Historian Robert Kiely argues that the legacy of colonial attitudes about peatlands for actors within the political administration at that time was nuanced. On C. S. Andrews, Kiely writes, “[his]own account of his industrialization of turf is striated with contradictions: on the one hand he decries civil servants who look down on bog development; on the other, his developmental triumphalism borrows from imperialist discourse of modernization or backwardness attached to the imagination of boglands.”²²¹ Despite the complexities of the Fianna Fáil position, peat development became a central policy objective in their project of state-building.

This began within the Department of Industry and Commerce, with Andrews and Lemass drawing on research and experimentation into the mechanisation of extraction as a way to developing peatlands on a large scale. The same experts that had contributed to the British Fuel Research Board’s report on peat were now collaborating with the Irish Free State government. These actors had been continuously working in peat since independence. Professor Hugh Ryan had translated German peat expert Alfred Hausding’s *A Handbook on the Winning and Utilisation of Peat* to English in 1921.²²² This provided insights into methods of mechanised extraction that had

²²⁰ Michele Dowling, “‘The Ireland That I Would Have’: De Valera & the Creation of an Irish National Image,” *History Ireland* 5, no. 2 (1997): 37–41.

²²¹ Robert Kiely. “World-Ecological Satire: Peat, Brian O’Nolan, and the Irish Free State’s Energy Regime.” *Irish University Review* 49, no. 1 (May 2019), 94.

²²² Alfred Hausding and Great Britain Fuel Research Board. *A Handbook on the Winning and the Utilization of Peat*. Translated from the 3d German Ed. by Hugh Ryan. (London Stationery Off, 1921).

been developed in the peat industry in Germany. In 1924, Sir John Purser Griffith began development of the bog at his own site in Turraun, Co. Offaly.²²³ He experimented with mechanised peat-extraction and manufacturing peat briquettes. These were compacted bricks of peat that had a higher calorific value than sod peat. These investigations were evidence for state actors that investment in peatlands was economically and energetically viable.

The continued expansion of transnational peatlands networks was also a crucial component in bolstering the industrial peatland imaginary. Professor Pierce Purcell was instrumental in establishing and maintaining these networks. From his time in the Fuel Research Board through the 1930s, he made connections with peat industrialists in Scotland, Germany, Denmark, Holland, the Soviet Union, and Canada.²²⁴ From these connections he accumulated reports, maps, diagrams, and statistics on international developments in peat winning and processing. Figure 1.3 shows an advertisement for a Danish peat sod-forming machine, found in Purcell's collection.²²⁵ Purcell, like Griffith, was interested in the manufacturing of peat briquettes and this led him to factories in Dumfries in Scotland and Kaas in Denmark, where he observed the PECO methods of milling peat and briquette manufacture.²²⁶ This transnational influence on the value-making process with regards to peatlands was crucial in contributing to the knowledge base of the fledgling state peat industry.

²²³ Clarke. *Brown Gold*, 17-18.

²²⁴ 'International comparative reports,' dated 1903-1950. NAI PRIV/1364/3/1.

²²⁵ "Printed foreign language advertisements for peat machinery." NAI PRIV/1364/3/5/1

²²⁶ PECO was an acronym for Peat Experimental Company, established in the 1920s, this was a company based in Dumfriesshire in Scotland that included Swedish and Scottish engineers. They were pioneers in developing mechanised methods of drying and extracting peat. See Clarke. *Brown Gold*, 19-20.



Figure 1.3 The 'Cæsar,' described as the "best existing peat forming machine,." in NAI PRIV/1364/3/5/1

Fianna Fáil was armed with this body of research and with the resources and authority of the state. Actors within the party thus had at their disposal a range of policy instruments to materially realise the large-scale peatland imaginary that had occupied elite-level research and rhetoric in one form or another since the days of the Bogs Commission. The Fianna Fáil government attempted to mobilise this peatland imaginary by putting structures in place to facilitate peat development, using the language of developmentalism to legitimise these policies. Imbued with an urgency and an idealism, Andrews stated that “the development of the bogs was a crusade rather than a commercial project.”²²⁷ The position of the Department of Industry and Commerce was that peatland development could solve a number of challenges that Ireland was facing and align with the party’s ideological agenda. This valuation of peatlands was driven at the state-level and operationalised through interactions between political actors, communities, and the bogs themselves.

²²⁷ C. S. Andrews. *Man of No Property*. (New York: Lilliput Press, 2011), 252.

The first major intervention into peat development was The Turf Scheme in 1932 in which the state intervened in local peat markets from the national level.²²⁸ This was a policy measure that then Minister for Defence Frank Aiken had encouraged. His continued interest in peat development was crucial to the momentum within the Fianna Fáil administration.²²⁹ At this point, there was no specific department tasked with turf policy and so Seán Lemass employed the services of C. S. Andrews at the Department of Industry and Commerce to facilitate implementation. The Scheme was intended to reduce rural poverty and emigration through state intervention in the fuel market by attempting to standardise peat quality, investing in transport, and setting a fixed price for peat sods.²³⁰ It was hoped that this intervention would stimulate the peat economy, facilitate infrastructural development in rural areas and, crucially, reduce dependency on fuel imports.

A 1933 memo from the Department of Industry and Commerce to the Department of the Taoiseach relating to the aims of the Scheme sheds light on the priorities of government actors at this time.²³¹ The memo outlined some of the intended outcomes of the scheme and the ideological beliefs underpinning them. These were “to develop a national resource of primary importance and thereby materially increase employment in rural areas where peat bogs exist,” and “a general gain to the State resultant from the drainage of peat-bog areas and the reclamation of bog lands for afforestation and agricultural purposes generally.”²³² These goals highlighted the ways in which the Fianna Fáil administration, driven from the Department of Industry and Commerce, were positioning peat as a resource of national importance. Interventions into bog landscapes were perceived as a beneficial course of action for rural development and energy independence. There was also a continuity of the language of improvement which could only imagine the bogs as a

²²⁸ Clarke. *Brown Gold*, 25-27

²²⁹ In his autobiography, Andrews wrote, “. . . without Aiken there would never have been a Bord na Móna.” In Andrews. *Man of No Property*, 191.

²³⁰ Clarke, 26.

²³¹ Memo, dated 1933, “Extension of peat fuel production – first stage.” NAI, TSCH/3/S6297.

²³² Memo. NAI TSCH/3/S6297.

“gain” to the state after drainage. The language employed during the implementation of the Turf Scheme also suggested a long-term vision of fuel abundance, as evidenced by this assertion from another government memo, stating “it is estimated that we have sufficient peat to supply our total requirements of fuel for all purposes at our present rate of consumption for over 300 years.”²³³ Fianna Fáil actors in this case were committed to developing a narrative about the value of peat that imbued it with a national significance and projected a long future for peat extraction.

The implementation of this policy was limited by the state’s organisational and resource capacity and required a reliance on existing infrastructure and community networks. Coordination of the Turf Scheme was outsourced to the Irish Agricultural Organisation Society, who were tasked with establishing community peat co-ops and supervising quality standards.²³⁴ Historian Patrick Doyle contends that the IAOS acted as a network for the mobilisation of “knowledge and resources” in rural Ireland, supplementing imperfect government policy.²³⁵ Historian Mo Moulton argues that cooperative societies occupied a unique position in Ireland during the time of the Free State.²³⁶ Despite their ideological underpinnings as democratically organised, quasi-autonomous groups, they often functioned as mediators of state power. In the case of peat production at this time, the IAOS functioned as an extension of legislative authority.

Andrews, from his position in the Department of Industry and Commerce, attempted to oversee and facilitate interactions between the various stakeholders of the Scheme but this proved a challenging task. The Scheme necessitated coordination between the Department of Industry and Commerce, the IAOS, and a range of other agencies. These included the Land Commission who

²³³ Memo, dated 1933, “Utilization of Peat Resources.” NAI, TSCH/3/S6297.

²³⁴ Clarke. *Brown Gold*. 2010: 26.

²³⁵ Patrick Doyle, *Civilising Rural Ireland: The Co-Operative Movement, Development and the Nation-State, 1889-1939* (Manchester: Manchester University Press, 2019).

²³⁶ Mo Moulton, “Not to Nationalise, but to Rationalise? Cooperatives, Leadership and the State in the Irish Dairy Industry 1890 - 1932.,” *Irish Economic and Social History* 44, no. 1 (2017): 85–101.

oversaw land acquisitions and ownership, the Industrial Research Council who facilitated the dissemination of peat-cutting research, rail and canal companies for the transportation of peat fuel, the Central Marketing Board for advertising, and the Prices Commission for the determination of the monetary value of peat.²³⁷ Each of these groups had their own priorities and consequently the Scheme was beset by delays in funding, quality inconsistencies, and price fluctuations.²³⁸ While a rhetorical landscape favourable to peat development had been established by Fianna Fáil, the Turf Scheme highlighted the need for greater state intervention that was more centralised and had greater authority.

Therefore, in 1934, the government established the Turf Development Board as a semi-state company.²³⁹ The TDB had a comprehensive mandate that centralised the coordination and organisation of all aspects of peatland development. The necessity of the Board for the implementation of peat policies was clear in the writing of C. S. Andrews. In his autobiography, he wrote,

“the rigidity of the civil service system made it impossible to carry out the job assigned to me and [I] insisted that unless I got authority to do what I thought necessary to carry out the government’s policy I would refuse to accept the responsibility. I suggested that if the administrative regulations could not be waived the best alternative was to set up a new organization independent of the civil service to be run on the lines of the ESB.”²⁴⁰

The establishment of the Board signalled a commitment by the Fianna Fáil administration to peat development. Having observed the successes of the Shannon Scheme and the Electricity

²³⁷ Memo for the Executive Council, dated 17 February 1934, “Peat development scheme.” NAI, TSCH/3/S6297.

²³⁸ Memo. NAI, TSCH/3/S6297.

²³⁹ Clarke. *Brown Gold*, 27.

²⁴⁰ Andrews. *Man of No Property*, 199.

Supply Board it was clear to government actors that state-intervention in energy production could be effective economically and socially.

According to Andrews, one of the key priorities of the Board was incorporating existing peat research into policy.²⁴¹ He enlisted John Purser Griffith and evaluated the results of his peat experiments in Turraun. This allowed him to estimate the potential of these industrial interventions on a large-scale for the Irish State. The new Turf Board also utilised the maps of the Bogs Commission to identify potential sites for development.²⁴² Andrews explored the recommendations of *The Winning, Preparation, and Use of Peat in Ireland* which had concluded that in order for peatlands to yield their maximum value, the state should oversee developments, compulsory land acquisition was essential, and investment in mechanisation of extraction and electricity generation were vital.²⁴³ Pierce Purcell's extensive transnational peat network was also mobilised by the Board to accumulate information and research from peat industries in other countries.

This manifested in 1935 with the visit of a delegation appointed by the Department of Industry and Commerce to Germany and the Soviet Union for the purposes of investigating their peat industries. This delegation included Purcell and Andrews, as well as P. G. Murphy, an engineer from the ESB, and E. J. Duffy, a county surveyor. The various positionalities of these men reflected the multidimensional governance that was emerging around peat development. Duffy had had experience in implementing the measures of the Turf Scheme in County Meath, while Murphy's role in the delegation was to assess the production of electricity from peat in the various power stations in Germany and the Soviet Union.²⁴⁴

During this trip the delegates visited several mechanised peat works and peat experimental stations; and observed the production of peat products like briquettes, peat coke and tar, as well as

²⁴¹ Andrews, 205.

²⁴² Andrews, 245.

²⁴³ Andrews, 177-179.

²⁴⁴ For extensive detail on this trip see Andrews, 210 – 239.

the successful operation of large power stations which utilised peat fuel for the generation of electricity.²⁴⁵ For Andrews, the trip was significant in bolstering his belief in the potential of the peat industry. He was able to see how peatlands could become profitable, and standards of living could be raised. Reflecting on one of the stops in Germany he wrote, “it was indeed hard to believe that such spacious living could be derived from a bog. My ‘race unconscious’ was stirred. Turf and bog were not words of derision here. Weismoor could easily have been reproduced in Ireland.”²⁴⁶

In the report by the delegation, their ultimate recommendations were the implementation of a mechanised system of peat extraction on a larger scale, utilising the milled peat method which they had observed.²⁴⁷ As well as this, they called for the establishment of a peat research centre to conduct experiments and trials in peat products and machinery to suit Irish conditions, which they concluded were unique. Finally, the report recommended the establishment of power stations in Ireland to be fuelled by peat.

The visit to Germany and the Soviet Union by the peat delegation was significant in providing further evidence of the viability of peat as an industrial resource, as well as a lens into a prosperous future that Ireland could achieve. It further added complexity to the ways in which Fianna Fáil governance of the Irish Free State facilitated international relations. While it is true that this visit coincided with an increasing protectionist economic policy and cultural isolationism, peat research was an avenue for transnational and international cooperation in the 1930s. The delegation was exposed to the political and economic system that was being developed in the Soviet Union and they seemingly experienced it with curiosity, though not conviction. According to Andrews, “Purcell regarded Russian socialism as an aberration or a joke. He refused to take it seriously and believed that the Russian state could not survive without the help of foreign technicians and

²⁴⁵ C. S. Andrews et al., “Report of Peat Delegation to Germany and Russia,” 1935. ESB Archives (hereafter ESBA).

²⁴⁶ Andrews. *Man of No Property*, 215.

²⁴⁷ Andrews et al., “Report of Peat Delegation,” 11-12.

capitalists – and by ‘foreign’ he meant ‘British.’”²⁴⁸ Overall, however, Andrews himself described being impressed by the industrial policies of the Soviet Union. In particular, Lenin’s investment in the production of electric power.²⁴⁹

The example of the Soviet peat system was influential in Ireland beyond its technical and organisational aspects. Robert N. Tweedy, an electrical engineer, supporter of the Irish Free State, and founder member of the Irish Communist Party, conducted his own visit of the Soviet Union in 1935, briefly encountering Andrews and the peat delegation.²⁵⁰ In a paper given by Tweedy to the Engineering and Scientific Association of Ireland in 1935, he outlined an alternative vision of peatland development in Ireland that was developmental in its outlook but with decidedly more socialist leanings than the contemporary ambitions of the Turf Development Board.²⁵¹

In this paper, Tweedy gave an extensive account of the Soviet peat industry which he used to support his vision for Ireland. “In future,” he wrote, “our national economy must be based upon human lives, rather than upon money values.”²⁵² Tweedy’s vision included a complete appropriation of Ireland’s bogs by the state which would be responsible for drainage and preparation works, acquisition of machinery, as well as construction of housing and community settlements. Once the system of works and settlements were operational, they would be given to the community itself for management. He said, “in practice all settlements within a bog district would be integral parts of a single community which would work to production plans decided communally. The land would not be a charge on the people, but the equivalent of rents, rates and

²⁴⁸ Andrews. *Man of No Property*, 221.

²⁴⁹ Andrews, 225.

²⁵⁰ “Tweedy, Robert Naudin,” *Dictionary of Irish Architects 1720 – 1940*, accessed 1 February 2023, <https://www.dia.ie/architects/view/7351/TWEEDY-ROBERTNAUDIN>.

²⁵¹ Robert N. Tweedy, “The Production and Use of Turf in the U.S.S.R with Proposals for a Planned Power Economy in Ireland.” (Engineering and Scientific Association of Ireland, Dublin, 1935). UCDA, P91/49.

²⁵² Tweedy, “The Production and Use of Turf in the U.S.S.R,” 11.

taxes would be paid to the State out of the produce of the bogs.”²⁵³ While Tweedy’s vision for a planned power economy had little impact in the Irish state’s governance of Irish peatlands, it highlights the ways in which peat landscapes were being conceptually and materially mobilised in the service to contrasting political visions in Ireland.

Despite the establishment, then, of a governing body and the increased production of research and technological expertise, the peat economy did not progress as rapidly as actors within the Fianna Fáil administration had hoped. As Andrews remarked, the project was “inherently defective.”²⁵⁴ A lack of standardisation, land access issues, and competition from coal were among the key impediments to the progress of the turf scheme he identified. These constraints motivated the Department of Industry and Commerce to initiate a Turf Development Bill in December 1935 that would establish greater legal legitimacy for the development of the peat industry.²⁵⁵ The Bill was intended to facilitate some of the wider aims of the state. These included national energy self-sufficiency, protection of Irish industry, rural development, and mitigating unemployment and emigration.

The Bill gave powers to the Minister for Industry and Commerce for compulsory land acquisition and attempted a major intervention into the fuel market in Ireland by mandating a proportion of peat fuel be sold by all coal merchants.²⁵⁶ Andrews, when reflecting on the impact of the Turf Development Act, considered the compulsory land acquisition to be the most significant outcome as it enabled the Board to acquire vast tracts of peatlands at economic prices, with the

²⁵³ Tweedy, 12.

²⁵⁴ Andrews. *Man of No Property*, 193.

²⁵⁵ Turf (Use and Development) Act, 1936.

<https://www.irishstatutebook.ie/eli/1936/act/23/enacted/en/html?q=turf+&years=1936>

²⁵⁶ Turf (Use and Development) Act, 1936.

assistance of the Land Commission.²⁵⁷ Additional measures included in the Bill were funding for infrastructural development and the marketing of peat fuel.

The political debate surrounding the Bill commenced in early 1936 and was primarily split along partisan lines. This highlighted the divisions and disagreements over the direction that Ireland's development should take. Party unity suggested a growing consistency in Fianna Fáil's position regarding peat development. Lemass stated that "turf has its place in the industrial life of two of the most highly industrialised countries in the world, Germany and Russia, and we are entitled in this country to look forward to a similar development."²⁵⁸ Fianna Fáil Teachtaí Dála framed the Bill in nationalistic terms and argued that opposition to it was unpatriotic.²⁵⁹

The chief concerns of those in opposition, primarily Cumann na nGaedheal T.D.s, were the increased powers to the Minister and the sale-of-peat mandate which was considered to be an encroachment on individual liberties.²⁶⁰ This concern was reflected in media reporting at the time with one publication describing the measure as "grate-governing."²⁶¹ Another article at the time quoted statements from the Money Resolution Stage of the debates that claimed Lemass was

²⁵⁷ Andrews. *Man of No Property*, 194.

²⁵⁸ Seán Lemass, speaking in Houses of the Oireachtas. "Committee on Finance. - Turf (Use and Development) Bill, 1935—Second Stage. – Dáil Éireann (8th Dáil)," text, April 28, 1936. Ireland. <https://www.oireachtas.ie/en/debates/debate/dail/1936-04-28/24>.

²⁵⁹ Eamonn Donnelly, for example, remarked, "I think that it is unpatriotic – to use a mild adjective – to sneer at any attempt being made by any Government to develop any Irish industry." In "Committee on Finance. - Turf (Use and Development) Bill, 1935—Second Stage. – Dáil Éireann (8th Dáil)," text, April 28, 1936. Ireland. <https://www.oireachtas.ie/en/debates/debate/dail/1936-04-28/24>.

²⁶⁰ "Committee on Finance. - Turf (Use and Development) Bill, 1935—Second Stage. – Dáil Éireann (8th Dáil)," text, April 28, 1936. Ireland. <https://www.oireachtas.ie/en/debates/debate/dail/1936-04-28/24>.

²⁶¹ "Unfortunate Admission," *Evening Echo*, May 28, 1936.

“becoming more Hitlerite every week.”²⁶² These objections indicated a significant discomfort at the level of state intervention in the fuel economy that was being proposed by this Bill.

Another objection was mounted by Daniel McMenamin, a Cumann na nGaedheal T.D. representing Donegal. He argued that young, unemployed men would not be attracted to the labour offered by the Bill. He claimed that they expected, “that there would be an end to all slavery in the bogs, an end to looking after sheep and cattle and saving turf. The young man of today is not going to bother himself wasting his time in the bog.”²⁶³ McMenamin’s remarks highlight the challenge for Fianna Fáil who had after all secured political power on a platform of economic development. While the industrial peat imaginary had at this point still to overcome pre-existing prejudices and beliefs about the bogs and the kind of work associated with them, the debates and media coverage surrounding the Bill generated a national discourse which increasingly began to associate peat development with the progress and modernisation of the State.²⁶⁴

Anxieties surrounding the finiteness of the peat bogs also emerged in the debates. Professor John Marcus O’Sullivan, a Cumann na nGaedheal T.D. from Kerry, expressed concern over the ways that large scale extraction could “artificially stimulate the use of turf” to the point where it could be cutaway in ten to fifteen years.²⁶⁵ The overwhelming response to O’Sullivan’s concerns from FF T.D.s was the assertion that the bogs were an abundant resource and that O’Sullivan’s political opposition to the Bill led to scaremongering. McMenamin also expressed

²⁶² “Dáil Remarks,” *Evening Herald*, May 15, 1936.

²⁶³ Daniel McMenamin, “Committee on Finance. - Turf (Use and Development) Bill, 1935—Second Stage. – Dáil Éireann (8th Dáil),” text, April 28, 1936. Ireland.
<https://www.oireachtas.ie/en/debates/debate/dail/1936-04-28/24>.

²⁶⁴ Connacht Sentinel, Connaught Tribune, Irish Independent, Irish Press, Kerryman, Nationalist and Leinster Times, The Southern Star. (1935 – 1936).

²⁶⁵ John Marcus O’Sullivan, “Committee on Finance. - Turf (Use and Development) Bill, 1935—Second Stage. – Dáil Éireann (8th Dáil),” text, April 28, 1936. Ireland.
<https://www.oireachtas.ie/en/debates/debate/dail/1936-04-28/24>.

concerns in the debate over how much peat was available, and for how long would it last if production was increased.²⁶⁶ In response to these concerns, Lemass said,

“we can leave it to our grandchildren’s children to worry about the position that will arise when our resources in turf are exhausted. [...] Certainly the question will not be one of practical politics before then.”²⁶⁷

Lemass projected a confidence in the quantity of peat in Ireland that had been informed by the surveys of the Bogs Commission and the British Fuel Research Board. This exchange illuminates the urgency with which national development was being sought by the FF government through peat development, and how this development was being politicised. Ultimately, the question of the overall depletion of peatlands was dismissed as unrealistic and no more than a hypothesis devised by the opposition.

Promotion of the Bill in media allowed for the dissemination of Fianna Fáil’s vision to a wider audience. An article in the *Irish Press*, which was affiliated with Fianna Fáil, described the activities of a peat-cutting competition in Umeras Bog in Kildare in May 1936. The article highlighted how the participants were getting a glimpse into the future of Irish peatlands promised by the Turf Bill. The article claimed,

“a great new industry being born before their eyes. They felt that a national asset, the full value of which had never been previously recognised, was at last about to be developed on scientific lines with the result of materially adding to the country’s resources, of meeting the fuel requirements of the people, of eventually providing employment for forty or fifty thousand people, and of leaving the nation no longer dependant on foreign coal which

²⁶⁶ Daniel McMenamin, “Committee on Finance. - Turf (Use and Development) Bill, 1935—Second Stage. – Dáil Éireann (8th Dáil),” text, April 28, 1936. Ireland.
<https://www.oireachtas.ie/en/debates/debate/dail/1936-04-28/24>.

²⁶⁷ Seán Lemass, “Committee on Finance. - Turf (Use and Development) Bill, 1935—Second Stage. – Dáil Éireann (8th Dáil),” text, April 28, 1936. Ireland.
<https://www.oireachtas.ie/en/debates/debate/dail/1936-04-28/24>.

would drain away money that could be better spent at home, and the supply of which might at any moment be cut off by causes over which no control could be exercise here.”²⁶⁸

This article exemplified the Fianna Fáil approach to the challenge of state building. The modern and new coexisted with the traditional and essential. The article invoked the historical neglect of peatlands by colonial administrators as justification for a peat industry that would eliminate future dependencies on Britain.

Ultimately in 1936, the *Turf (Use and Development) Act* was passed by both houses of the Oireachtas. Under its authority, the first sites surveyed and purchased for large scale extraction by the Turf Development Board were 1600 acres of raised bog in Clonsast County Laois and 500 acres of raised bog in Lyreacrompane in County Kerry. The board purchased machinery from Germany to use for mechanised extraction on these sites. But the implementation of peat policy was inhibited by a lacklustre market for peat fuel, a continued lack of conviction by the public in the potential of peat as a resource of national importance, as well as the environmental and infrastructural challenges associated with the peat extraction.²⁶⁹

A further measure in the government’s ambitions came in the 1937 *Bunreacht na hÉireann* which officially established Ireland as an independent Republic and de-coupled it further from political affiliation with Britain.²⁷⁰ This codified the State’s rights and responsibilities with regard to national resources, further legitimising the project of national peat development.²⁷¹ But it was the onset of the Second World War in 1939 that most significantly accelerated Fianna Fáil’s vision for peatland development. While the war years presented their own challenges, demand for fuel skyrocketed in the wake of restrictions on coal imports. The State used multiple policy tools to

²⁶⁸ “Developing Our Peat Deposits,” *Irish Press*, May 18, 1936, 8.

²⁶⁹ Chapter Two will include discussion of the organisation of these peat works.

²⁷⁰ *Bunreacht na hÉireann* translates to Constitution of Ireland.

²⁷¹ “Constitution of Ireland,” Irish Statute Book, Accessed 13 March 2023,

<https://www.irishstatutebook.ie/eli/cons/en/html>

manage this resource crisis. In 1939, the Department of Supplies was established and led by Seán Lemass. This department was tasked with coordinating the accumulation and distribution of resources.²⁷²

Britain's coal requirements during the war meant that there had already been a decline in supplies to Ireland.²⁷³ But Ireland's neutrality during the war had significant consequences for energy policy with retaliatory measures including further restrictions on English and Welsh coal imports to Ireland in 1941.²⁷⁴ This situation limited the supply of fuel for heating purposes, as well as putting significant pressure on infrastructural networks, particularly railroads. This fuel crisis sparked a dramatic increase in policy outputs as the government tried to increase the capacity of peat extraction.

Hugo Flinn, who had the title of Fuel Controller during the Emergency years, in a letter to the Taoiseach in 1941, spoke of the challenges Ireland was facing with regards to fuel supplies. He wrote, "it is clear, therefore, unless we are to have empty hearths and cold firesides this winter that an absolute maximum of effort will have to be made by every existing Agency now cutting turf, as well as a huge new activity under the auspices of the County Councils."²⁷⁵ In the same letter, Flinn further asserted the national importance of peat extraction and the commitment of the government to facilitate this endeavour,

"every turf producing county in Ireland, having regard to the fact that it will not get coal, will have an active natural market in the demand of fuel up to the limit of twice its normal

²⁷² Clarke. *Brown Gold*, 44.

²⁷³ Clarke, 45.

²⁷⁴ Mary E. Daly. *The Buffer State: The Historical Roots of the Department of the Environment*. (Dublin: Institute of Public Administration, 1997), 263.

²⁷⁵ Letter, dated 17 April 1941, from Hugo Flinn to the Department of the Taoiseach, 'Fuel Position,' NAI, TSCH/3/S6297.

consumption of coal, and any surplus over and above that amount, if it were fortunate and patriotic enough to produce it, will be taken off its hands.”

During the war, the government made a range of interventions into the fuel market and tried to stimulate increased peat production.²⁷⁶ These interventions included a renewed investment in the rural turf schemes coordinated through local councils. The government further mandated the use of peat for heating in all government buildings. As well as this, they commissioned infrastructural development of roads and peat banks

Perhaps the most significant measure was the establishment of the Hand-Won Scheme on Turf Development Board bogs in Counties Kildare and Offaly.²⁷⁷ This scheme attempted to increase peat production on sites in closer proximity to Dublin where the transportation of fuel to the city would be more feasible. Due to the large migration of labour to the midlands, the Board built camps that included hostels to house workers beside the peatlands, dining, and sanitary facilities, and road and rail infrastructure to access the bogs. Drainage and extraction works were almost exclusively carried out by hand although machine-cutting of peat at sites in Turraun, Clonsast, and Lyreacrompane increased. The conditions of the war meant that machinery parts were extremely difficult to import from suppliers in England and Germany and so the primary focus of this scheme was on manual as opposed to mechanised labour.

These policy interventions by the Fianna Fáil government via the Turf Development Board during the Emergency years provided an institutional framework within which experimentation and innovation in peat policy could occur, necessitated by the fuel crisis. Despite challenges, the conditions in Ireland facilitated the acceleration of peatland policies and situated peat in the Irish mindset as a resource of national importance. Fianna Fáil had implemented, throughout the first thirteen years of their administration, a series of policy instruments that created an institutional

²⁷⁶ Clarke. *Brown Gold*, 44-69.

²⁷⁷ These schemes feature significantly in Chapter Two.

framework for the development of Irish peatlands, situating them at the heart of national energy discourse.

The war years had heightened the urgency for industrial peat development, as Seán Lemass articulated in the debate surrounding the passage of the 1946 Turf Development Act. He stated,

“our experience during that period [1939-1945], as well as the experience gained in the Turf Development Board in the limited mechanised production projects in which it was engaged before the war, have convinced us that, if we have a long-term fuel problem, we can solve it. We can solve it by producing from our own resources a suitable fuel of a consistent quality and at a reasonable price. The development of our turf resources is desirable not merely as a safeguard against a continuation of circumstances in which fuel from other sources will not be available, but also for the national economic advantages which will flow therefrom. In developing our natural resources instead of importing our requirements, we will not merely add to the wealth of the country, but will give directly a great deal of employment in localities where that employment will have very beneficial reactions.”²⁷⁸

The 1946 Turf Development Act legislated for the First Turf Development Programme, a Department of Industry and Commerce-authored programme that was intended to structure the industrial development of peat resources for the next ten years.²⁷⁹ This included financing the increased utilisation of machinery for drainage and extraction of peat, the establishment of power stations in situ on peatlands, the establishment of a peat research centre, and increased powers of land acquisition.

The passage of this Act transformed the Turf Development Board into a new semi-state company, Bord na Móna. The new name, translated as The Turf Board, was an attempt to fully dissociate from any negative connotations with the word ‘turf,’ as well as signalling the national

²⁷⁸ Seán Lemass, in Houses of the Oireachtas “Turf Development Bill, 1945—Second Stage. – Dáil Éireann (12th Dáil).” Text, February 21, 1946. Ireland, <https://www.oireachtas.ie/en/debates/debate/dail/1946-02-21/18>

²⁷⁹ “The Turf Development Programme,” (Dublin: Department of Industry and Commerce, 1946).

legitimacy of the new organisation through the use of Gaelic.²⁸⁰ According to the legislation, this company would have no statutory authority but would conduct its own policies and programmes. In practice, the administration of the company was relatively unchanged.

The Board was initially financed from a central public fund that was capped, but with flexibility for advanced capital if it was deemed necessary. This funding was to be repaid with interest when the Board was financially viable, with its financial reports being delivered to the government annually.²⁸¹ The managing structure consisted of a chairman, managing director, and at least five other members. The chairman and managing director could be nominated by either the other board members, or the Government. The first managing director of Bord na Móna was, naturally, C. S. Andrews.

Returning to Andrews' remarks in *Administration* in 1953, his determination towards the goals of peat development was underlined by confidence "in ourselves, and in the nation."²⁸² After more than one hundred years of top-down engagement with peatlands, Andrews and his peers in Fianna Fáil had created the conditions necessary for the industrial peatland imaginary to be materially realised. This work had required the co-opting of a colonial knowledge base, and this inevitably meant the absorption of beliefs and biases with regards to peatlands. The generation of new research and data, as well as transnational collaboration further added to this belief system. And, ultimately, through the massive extension of state power towards interventionist and developmental policies, the framework for a new peat industry was established.

Political elites in Ireland had come to perceive the bogs as natural resources, fusing imperial and nationalist legacies of peatland imaginaries. Any claim of Ireland's peatlands as *national* resources must consider the legacies of imperial value-making. There was a continuity of

²⁸⁰ Andrews. *Man of No Property*, 197.

²⁸¹ Turf Development Act, 1946.

<https://www.irishstatutebook.ie/eli/1946/act/10/enacted/en/html?q=turf+development&years=1946>

²⁸² Andrews, "Turf - A Myth?" 39.

beliefs about peatlands and implementation of policies that had their origins in imperialist structures and institutions. These institutional legacies influenced attempts to reappropriate the bogs by Irish political elites and shaped the policy choices of the Free State and the Irish Republic. They necessitated a reliance on pre-existing industrial knowledge in the absence of a robust national industry.

Furthermore, claiming Ireland's peatlands as *natural* resources must recognise the process of social construction at the elite level. Rhetoric, debate, market interventions, surveying, experimentation, research, mapping, legislation - these acts of engagement with the natural world, materially or intellectually, created meaning and gave weight and value to the objects of their attention. The range of actors involved necessarily complicates the idea of the 'state' as a singular entity. Beliefs and attitudes about peatlands in Ireland developed through interactions between imperial actors, engineers, scientists, political activists, national government operatives, and the non-human, peat landscapes themselves.

The industrial peatland imaginary that had been under construction since the early nineteenth century was realised by the Irish government, through the Fianna Fáil administration in the 1930s and 1940s. By 1946, the state had built the frameworks for an entirely new energy system in Ireland. This system involved transformations of the methods of extraction, conversion, and utilisation of peat. And, while these frameworks were essential, many aspects of these new inputs and outputs to the industrial peat system were mediated through social production and reproduction across spatial, temporal, and human scales. This is the focus of the following three chapters.

Chapter Two

Bog Bodies

Nature and Labour in Ireland's Peatlands

I. Introduction

“He didn’t take off his coat. It was too bitter, the wind from behind him. He had already prepared the bank for cutting, having been two days with the spade clearing away the top of it to a depth of two feet, two feet of heather and gorse and the tangled roots of the ferns. A hard job, dragging away at nature like that, and she only doing a good job of covering the top of the bog, trying desperately to make it into good land.

He spat on his hands and started to dig with the sleán. He liked the way it cut into the bog. Cut and thrust and lift with the knee and you had a grand shaped sod of bog like jelly, only firmer, and you threw this away on the dry parts one side you and it rested there and you cut it again and pitched so that it lay beside the other, and it was part white and part brown and the deeper you dug into the layer of the bog the browner and blacker it became. Poor turf on top, brown cooking turf in the middle and the black brittle coal turf below.”²⁸³

Cahal, the protagonist of Walter Macken’s 1952 novel *The Bogman*, is here described at work on the bog in the West Galway community in which the story is set. His body is exposed to the elements, the bitter wind, his hands bare on the handle of the sleán.²⁸⁴ The work is physical and tactile. Macken highlights the movement of his limbs and the texture of the sods of peat. The

²⁸³ Walter Macken, *The Bogman* (Dingle: Brandon, 1999), 65.

²⁸⁴ This was a tool, like a spade, used to cut peat from bogs.

passage of deep time is made visible through his work, with each layer of peat having a value according to its physical attributes, these attributes a consequence of thousands of years of decomposition. Cahal understands the natural flora of the bog, the gorse and heather, while simultaneously working in opposition to them to extract fuel from the landscape.

Macken's text is part of a corpus of Irish literature that utilises the *work* of peat extraction as a means through which to understand Irish identity, history, and nature.²⁸⁵ The ubiquity of bog labour, 'a day on the bog,' particularly for rural communities, makes it a powerful setting for multiple scales of analysis. However, despite the pervasive associations of peatland labour with the rural imaginary, in the twentieth century this relationship to bogs was completely transformed. With the development of industrial systems of extraction, the labour and nature of Ireland's peatlands would have been completely unrecognisable to Cahal.

This chapter traces the ways in which peatlands as *worksapces* transformed throughout the twentieth century in Ireland.²⁸⁶ It argues that the materiality of these dynamic environments influenced the technologies of extraction and the social and cultural meaning-making for both workers and the institutions within which they worked. Although there were fundamental

²⁸⁵ For analysis of the role that peat extraction plays in the works of Seamus Heaney and Edna O'Brien see Maureen O'Connor and Benjamin Gearey, "'Black Butter Melting and Opening Underfoot': The 'Peat Harvest' in Irish Literature and Culture," *Green Letters* 24, no. 4 (2020): 381–90.

²⁸⁶ This chapter incorporates historian Thomas Andrews' 'workscape.' This concept moves beyond the constraints of the static landscape to incorporate the interactions between, as he puts it, "not simply land, but also air and water, bodies and organisms, as well as the language people use to understand the world, and the lens of culture through which they make sense of and act on their surroundings." In Thomas G. Andrews. *Killing for Coal: America's deadliest Labor War*. (Cambridge, Massachusetts and London, England. The Harvard University Press. 2008), 125. This framework is applied to peatlands by historian Katja Bruisch in her forthcoming book *Burning Swamps*. Through this lens, Bruisch makes visible the entanglements between human and more-than-human agents in Russian peatlands. In Katja Bruisch, *Burning Swamps: Peat and the Forgotten Margins of Russia's Fossil Economy*, forthcoming 2025.

transformations to the scale and processes of peat extraction, the material properties of the bogs continued to shape and constrain these processes. This chapter demonstrates that systems of work were organised within institutional frameworks, but the transformation of people and the land happened through material interactions between labour and nature. The energy of human bodies and the fossil energy of machinery connected to produce new relationships, identities, and landscapes in the bogs.

For the purposes of analysis, this chapter isolates three historically distinct systems of extraction in Irish peatlands. These are the peat *harvest*, the state's 'hand-won schemes,' and Bord na Móna's 'industrial peatlands.' These categories are neither static nor definitive, indeed, their fluid and overlapping nature is demonstrated. However, these categorisations allow for multiple scales of comparison over time, such as the methods, technologies, and cultures of extraction.

As part of the rural peat harvest, extraction was a crucial part of a subsistence energy economy in rural Ireland. Under this system of turbary rights and co-operative labour, peat extraction was embedded in the agrarian work season. The methods and technologies of the peat harvest were based on human labour. Beginning in 1932, the state-led 'hand-won' schemes introduced a more centralised system of management wherein the Department of Industry and Commerce, and later the Turf Development Board, were coordinating institutions in the extraction of peat. Waged labour and increased scales of production were key features of these schemes which still primarily depended on hand-winning methods of extraction. From 1946 onwards, the establishment of Bord na Móna and the implementation of the first Turf Development Programme created the conditions for a new economic and labour paradigm. The widespread introduction of machinery to increase efficiency and productivity on the bogs meant that human-nature relationships were increasingly mediated through fossil fuel-powered machines.

In order to examine these phases in the history of peat extraction, a wide range of sources are utilised. These include folklore materials, anthropological studies, oral history interviews, workers' periodicals, local histories and poetry, newspapers, advertisements, state documents, and institutional publications and reports. These materials provide opportunities but also challenges.

Therefore, they are situated in the context of their production throughout. The value of these sources is in their ability to shed light on sometimes overlooked demographics. When used in combination with archival material, these become a powerful lens into the history of labour in Ireland's bogs.

II. The peat harvest

In 1932, when the Fianna Fáil government introduced the first Turf Scheme to increase the production of peat fuel, a system for the extraction of peat had already been in place in Ireland for hundreds of years. Access to peat for fuel was organised within a system of turbary rights which were essentially customary rights to cut peat.²⁸⁷ As a structure for the governance of resource extraction, it dated back to the fourteenth century at least.²⁸⁸ The legalities of access to bogs fluctuated with changing landholdings and colonial settlement. This traditional system of turf cutting meant that people had ownership of an area of bog which included rights to cut peat there for their own personal use.²⁸⁹ An absence of woodland and an abundance of peat in the rural regions of Ireland meant that it became over time “the poor man’s fuel.”²⁹⁰ It was necessary to heat

²⁸⁷ Turbary cutting continues in varying forms as a feature of the fuel economy of rural regions today.

²⁸⁸ Feehan and O'Donovan. *The Bogs of Ireland*, 5.

²⁸⁹ Feehan and O'Donovan, 30.

²⁹⁰ Kevin Whelan. ‘The Modern Landscape: from Plantation to Present.’ In *Atlas of the Irish Rural Landscape*. F.H.A. Aalen, Kevin Whelan, and Matthew Stout (eds.), (Cork, Ireland. Cork University Press. 1997), 81.

homes, cook food, and survive cold winters. Historian Liam Kennedy argues that “turf remained the major fuel resource of Irish households from the seventeenth to the mid twentieth century.”²⁹¹

Peat extraction was carried out by hand.²⁹² The methods and tools for this work developed over time and across generations in response to the material conditions of peatlands. As a system of extraction, it remained functionally consistent over the centuries. Since the rural Irish economy was historically dominated by agricultural production, peat extraction was embedded within this economic framework.²⁹³ The seasonal nature of extraction meant that it was organised around other types of farm work. The use of the nomenclature *harvest* to denote peat extraction reflected this association with agrarian tasks. Beyond its subsistence value, the peat harvest happened within a system of cooperative labour that made it a focal point for community and social life. Furthermore, it connected those who cut peat with their environments. This work necessitated an understanding of the particularities of season, climate, and the profile of the bog.

Materials from the National Folklore Collection can help to make visible the organising principles, methodologies, tools, and socio-cultural beliefs inherent to rural peat extraction. Alongside these materials, the anthropological work by Conrad M. Arensberg and Solon T. Kimball, *Family and Community in Ireland* is utilized.²⁹⁴ The value of these sources is their ability to provide insight into the lives and practices of ordinary people. However, they were produced within specific contexts that informed the viewpoints and perspectives of the authors and institutions behind them.

²⁹¹ Liam Kennedy, “‘The People’s Fuel’: Turf in Ireland in the Nineteenth and Twentieth Centuries,” ed. Richard W. Unger, *RCC Perspectives*, Energy Transitions in History, 13, no. 2 (2013), 29.

²⁹² Feehan and O’Donovan. *The Bogs of Ireland*, 3.

²⁹³ Conrad M. Arensberg and Solon T. Kimball. *Family and Community in Ireland*. (Ennis, Ireland. CLASP Press. 2001); VI; XI-XII.

²⁹⁴ Arensberg and Kimball. *Family and Community in Ireland*.

The Folklore Commission was established by the Irish state in 1935 for the purpose of conducting oral interviews with people in rural communities about their traditions, customs, and experiences.²⁹⁵ It was state-funded through the Department of Education at the time and was in principle intended to be a repository of the history of ordinary people, and an ultimately apolitical endeavour.²⁹⁶ But, from the perspective of political actors, this project was a means to create a continuity with the rural experiences of Ireland's past, and thus legitimise the new state.²⁹⁷ The preservation of the Irish language was key to its mission and so it was considered a work of "national importance."²⁹⁸ The initiator of this organisation, Séamus Ó Duilearga was part of a wider European movement which practiced scientific principles in the recording and archiving of historical oral traditions.

As part of the Commission, 'collectors' were sent throughout rural Ireland, to primary schools and communities, to gather information on customs, stories, and traditions. These collectors were people living in specific areas or with an interest in particular areas who conducted interviews with local informants on a range of topics including belief systems and worship practices, food customs, sports, and practices of socialising.²⁹⁹ Ultimately, it is a vast repository of the experiences of rural life in the 1930s, but also of memories of customs, practices and traditions dating back to the participants' living memory. Its mission was central to the values and ambitions of the government at the time in the preservation of the kind of rural Irish society it deemed to be most valuable in its customs and morals, and at risk of disappearance with the development of modern settlements and

²⁹⁵ Henry Glassie. 'The Irish Folklore Commission: International Scholarship, National Purpose, Local Virtue.' *Béaloideas* 78 (2010).

²⁹⁶ Ríonach uí Ógáin, "Cnuasach Bhéaloideas Éireann: The National Folklore Collection, University College Dublin," *Oral Tradition* 28, no. 2 (2013): 317–24.

²⁹⁷ Mary E. Daly, "'The State Papers of a Forgotten and Neglected People': the National Folklore Collection and the Writing of Irish History," *Béaloideas* 78 (2010): 61 – 79.

²⁹⁸ Daly, 67.

²⁹⁹ Daly, 67-68.

urbanisation.³⁰⁰ The collection was conducted from the 1930s until as late as the 1980s. These sources capture the ways of life, feelings, and reflections of rural people in Ireland and therefore are extremely informative for identifying the position of peat-cutting in Irish society.

Arensberg and Kimball's 1930s anthropological survey further provides foundational insights into the experiences of rural communities in Ireland in the years following independence. The authors present a picture of a dynamic and hard-working society, one in which the necessities of daily life embedded working practices, traditions, and knowledge of season, climate, and environment inter-generationally.³⁰¹ The authors focused on family and community units through a detailed case study of a rural community in County Clare. This research was part of a larger sociological research project called The Harvard Study, which was conducted between 1931 and 1936.³⁰²

However, this study was also shaped by specific biases. The selection of the town featured as the case study was recommended by Ó Duilearga, who had spent time there working with local people and gathering stories and songs as part of the Folklore Commission.³⁰³ The selection process was also informed by the fact that County Clare was overwhelmingly supportive of the Fianna Fáil government, as indicated by the results of the most recent election.³⁰⁴ The relationship between the authors and the government of Éamon de Valera led to the censorship of entire sections of the text.³⁰⁵ Both the anthropological study, and the Folklore Commission emerged in a political context in Ireland that prioritised what was perceived to be traditional Irish culture. While they illuminate much of the characteristics of Irish country life, they were also part of a larger

³⁰⁰ Daly, 67.

³⁰¹ Arensberg and Kimball. *Family and Community*, XI-XII.

³⁰² Anne Byrne, Ricca Edmonson, and Tony Varley, "Arensberg and Kimball and Anthropological Research in Ireland," *Irish Journal of Sociology* 23, no. 1 (2015), 25-28.

³⁰³ Byrne, et al, 40-41.

³⁰⁴ Byrne, et al, 41.

³⁰⁵ Byrne, et al, 22-61.

political framework that selectively emphasised certain types of ‘Irishness’ over others. For instance, there was limited interest in collecting the folklore of urban communities.³⁰⁶ The process of collecting and remembering the customs and practices of Irish life was happening concurrently with the establishment of Irish industry and so part of the memories and reflections were coloured by the rapidly changing world around them. It is with this in mind that the materials will be explored to shed light on the rural peat harvest.

Peat extraction took place within practices of co-operative labour that permeated rural Irish culture. This type of work is the focus of historian Anne O’Dowd’s study *Meitheal*, which collates data on the forms and terminology associated with co-operative labour in Ireland.³⁰⁷ She describes co-operative labour as a “mutual aid [system],” and “a basic form of self-help necessary in subsistence economies dating back several centuries when farmers, through necessity, worked together for the attainment of common or similar objectives.”³⁰⁸ For O’Dowd, the key features of this organisation of work were unpaid mutual assistance and an underlying acceptance of the necessity of the work for survival.

The term most associated with this type of work in Ireland was *meitheal*. Arensberg and Kimball’s interpretation of the term, based on their investigation, was work done collectively by groups within a community in the interests of local people, and without the expectation of reciprocity, although often there would be an exchange of work.³⁰⁹ In the Schools’ Collection of the Folklore Commission, many compiled glossaries of Gaelic words that had been adopted into English speech include the *meitheal* as a task with specific connection to the peat harvest.³¹⁰ A

³⁰⁶ Daly. ‘The State Papers of a Forgotten and Neglected People,’ 67-68.

³⁰⁷ Anne O’Dowd. *Meitheal: A Study of Co-operative Labour in Rural Ireland*. (Dublin, Comhairle Bhéaloideas Éireann. 1981).

³⁰⁸ O’Dowd. *Meitheal*, 15.

³⁰⁹ Arensberg and Kimball. *Family and Community in Ireland*, 255

³¹⁰ “Irish Words and Phrases Used by Purely English Speakers in the Locality,” The Schools’ Collection (hereafter TSC), Volume 0047, 1937, Page 0127. National Folklore Collection (hereafter

meitheal could also be assembled to aid the crop harvest for older or childless community members, gathering the potato crop, moving and transporting large items requiring many hands or horses, and peat extraction. Beyond its functionality, O'Dowd also emphasises the often 'festive nature' of the meitheals. She states that beyond the support and survival underpinnings of this system of cooperative labour, it also served a social purpose that could include the sharing of food, music, and entertainment.³¹¹

The co-operative work that characterised the meitheal was, according to historian Patrick Doyle, a precursor to the later establishment of co-operative societies.³¹² However, in practice, Doyle argues that formal meitheals had decreased in regularity and scale since at least the mid nineteenth century. Population changes and the increasing prioritisation of waged labour meant that collective labour for subsistence was often an organizational challenge. Nonetheless, meitheals for the purpose of peat extraction persisted well into the twentieth century.

Peatlands remained essential resources for rural communities in the production of a critical subsistence good, peat fuel. While coal was available as fuel, its cost limited or even prohibited its use by rural families. And the nature of peat extraction was such that its seasonality and multi-stage process made it practically impossible to conduct alone. Michael O'Sullivan from Laspole in County Kerry, speaking to a folklore collector in 1941 defined the peat meitheal as follows, "regarding the cutting of turf there is a system of "joining forces" at this work. All the people help

NFC), UCD.; "Gaelic Salutations or Words Used Locally," TSC, Vol. 593 (1937), 120; "Some Irish Words I Heard Spoken in this District," TSC, Vol. 710, (n.a.), 80.

³¹¹ O'Dowd. *Meitheal*, 119.

³¹² Patrick Doyle. *Civilising Rural Ireland: The co-operative movement, development and the nation-state, 1889-1939*. (Manchester: Manchester University Press, 2019), 19.

each other.”³¹³ Another farmer from Longford, Michael McShane, was interviewed in 1938 and described the peat meitheal in this way,

“in May people begin to cut turf. The person who is cutting the turf has a slane. He has a man for wheeling the turf. The person who is wheeling has a wheelbarrow. He wheels the turf on that. Some days afterwards the turf are spread. The girls come with the dinner to the bog to the people who are working there.”³¹⁴

McShane’s quote highlights some important features of the process of peat cutting. Firstly, the work required more than one person. And tasks were assigned according to age and gender. Multiple men were necessary to efficiently extract the peat sods. And other family or community members, most often women or children, were responsible for feeding the workers. Secondly, a peat meitheal brought together people with different skills and resources. The slaneman has his own slane and the barrowman supplied his own wheelbarrow. These tools were essential for the work. Finally, McShane referenced the time of year. The peatlands had to be dry enough for the work to commence, and so it typically began in early Summer.

This seasonality was an important organising principle of the peat ‘harvest.’ In *Family and Community in Ireland*, the authors describe the process of peat extraction within the context of the agricultural season. Building a stock of peat fuel was essential in the preparation for winter and the work of extraction was thus woven in amongst other crucial summer work like thrashing or the potato harvest.³¹⁵ It was a task which could only be performed when the weather had been dry for

³¹³ Michael O’Sullivan, *The Main Manuscript Collection* (hereafter MS), Vol. 782 (1941), 441. NFC.

³¹⁴ Michael McShane. TSC, Vol. 767 (1938), 33-34.

³¹⁵ Arensberg and Kimball write, “with the return of warm weather and the drying off of the land, Irish summer begins. May is the first summer month. And by early May the bogs are dry enough to allow turf cutting to begin. The farmer must ordinarily find time between plantings to cut his year’s supply of fuel and stack it into “reeks” to dry under the summer warmth. The turf cutting, though not connected with

long enough that the bogs themselves were not wet, swampy, or dangerous. Some small-scale drainage practices would occur on personal bogs, trenches would be cut if the bog was too wet to allow water to drain, but for the most part, the work would be performed in early summertime so that the sods could be cut and dried during the dry season.³¹⁶ The work thus existed within parameters established by the non-human environment. These parameters were unstable and varied geographically and temporally, with water table fluctuations and climate variations.

An important insight into the materiality of the labour of the peat ‘harvest’ can be found in the recollections of Tadg Kelly from Kilrush in County Clare. Speaking to a folklore collector in 1953, he succinctly captured the intricacies of the work of peat extraction which necessitated skill, co-operation, and time. He recalled of peat,

“From once t’is cut, till its burned in the fire, range or hearth, t’is handled by man twelve [sic] times. T’is stripped; Tis cut; tis spread. Tis stooked. T’is stacked; T’is clamped; Tis put out on the road. T’is carried home; T’is emptied out of the cart. T’is brought in to the house and T’is burned.”³¹⁷

Kelly was outlining the stages in a process of extraction and consumption that showed the material, tangible labour involved in the peat harvest.

The process began in springtime. The first action was ‘stripping’ which involved the removal of the top layer of materials which included flora as well as the less dense, less combustible top layer of peat materials. After this, the peat was cut into sods from a ‘bank,’ using a

growing plants or animals, is an indispensable farm activity and takes place among the never varying tasks of the agricultural round.” In Arensberg and Kimball. *Family and Community in Ireland*, 42.

³¹⁶ Collector Michael J. Murphy observing drainage systems in Tyrone wrote, “if any water remains in the space between the new bank and “the hole”, a space of about two feet, it is drained off by cutting a track (“a water course”) which allows water to run past “the tail (or end) of the bank.” In MS Vol. 1216 (1950), 353.

³¹⁷ Tadg Kelly. MS Vol. 1371 (1953), 234.

tool known as a sleán. At the cutting stage, three men would be involved, one cutter, one catcher, and one barrowman to transport the sods to a spreading field. After this, the sods would be spread out in rows to dry in the air for a month or more depending on the weather. If there was a lot of rain, this would last longer. After this time, the sods would be turned or stooked.

Stooking was the process by which the sods were stacked in smaller piles and allowed to dry for a further month. This was more commonly known as footing. This work was primarily done by women and children, community or family members of the men who were cutting the peat. Next came stacking and clamping, which varied from region to region but were further processes by which the sods were stacked and arranged to facilitate drying as shown in figure 2.1. This was also known as ricking.

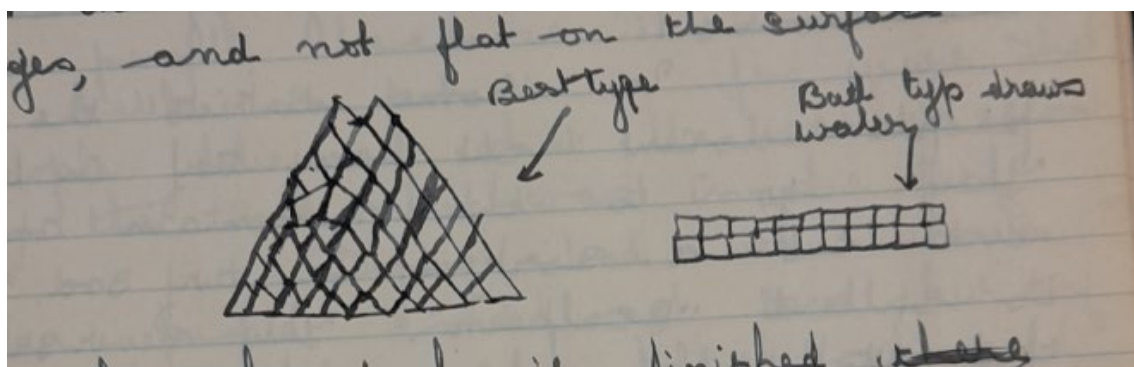


Figure 2.1 Sketches showing the formation of turf clamps in Lispole, County Kerry, in Michael O'Sullivan. MS Vol. 782 (1941), 447.

Since turbary bogs were typically in remote locations, the clamped sods had to be carried from the bog to the nearest road at which point they would be transferred into wagons, baskets, or lorries in order to be transported to the house of the owner of the peat. Once it reached the

homestead, the sods had to be re-clamped either in a storage shed or in the open air. Sods would then be carried as needed into the house to be burned in the fire.³¹⁸

The process overall was multidimensional - temporally, spatially, and materially. Workers moved peat from the depths of the bog, where it had existed for thousands of years, to the surface of the spreading fields, where it would stay for weeks and months. It would then be brought sometimes many miles on the roads back to the house and then into the fire, where the stock would be burned throughout the winter. The composition of the bog was transformed from a spongy, wet, protean material into reasonably uniform, dried, combustible fuel. This transformation was mediated through inherited skills and practices, tools, and co-operative labour.³¹⁹

Beyond this template for the practice of peat extraction, there was a great variation in language, methods, and tools used between counties or even parishes. Language and customary practice informed peoples' understanding of and interactions with the environments within which they worked. This was evident in the use of different Gaelic words to refer to similar things. For example, a small or broken piece of turf had multiple names depending on the region. In Kilkenny, it was known as a *cárán*, in Monaghan it was a *torpán*, and in Meath it was called a *clotóg*.³²⁰

Differences were also visible in the methods and implements used to cut peat. Some examples of this are shown in figure 2.2. The breast sleán was used to cut into the bog horizontally and was more frequently used on the raised bogs in the midlands of Ireland. Using this meant that sods could be cut "with the grain of the peat, and so the sods were less inclined to break and there was less waste."³²¹ The vertical sleán was used by those who would stand on top of the bog cutting

³¹⁸ The labour of managing and maintaining the peat fire was significant and will be discussed at length in Chapter Four of this thesis.

³¹⁹ For another detailed description of the labour of the peat harvest see Edward Egan. TSC Vol. 814 (n.a.), 57-58.

³²⁰ Found in the catalogue of the Main Manuscript Collection.

³²¹ Feehan and O'Donovan. *The Bogs of Ireland*, 20.

downwards to produce sods. These were a more common feature on blanket bogs in the west of Ireland. For others still, ordinary spades and shovels were used. Diversity in the drying process was another area in which distinctions could be seen. The formations of stacks of drying peat varied from place to place with these variations influenced by local climate, landscape, and the wetness of the peat.

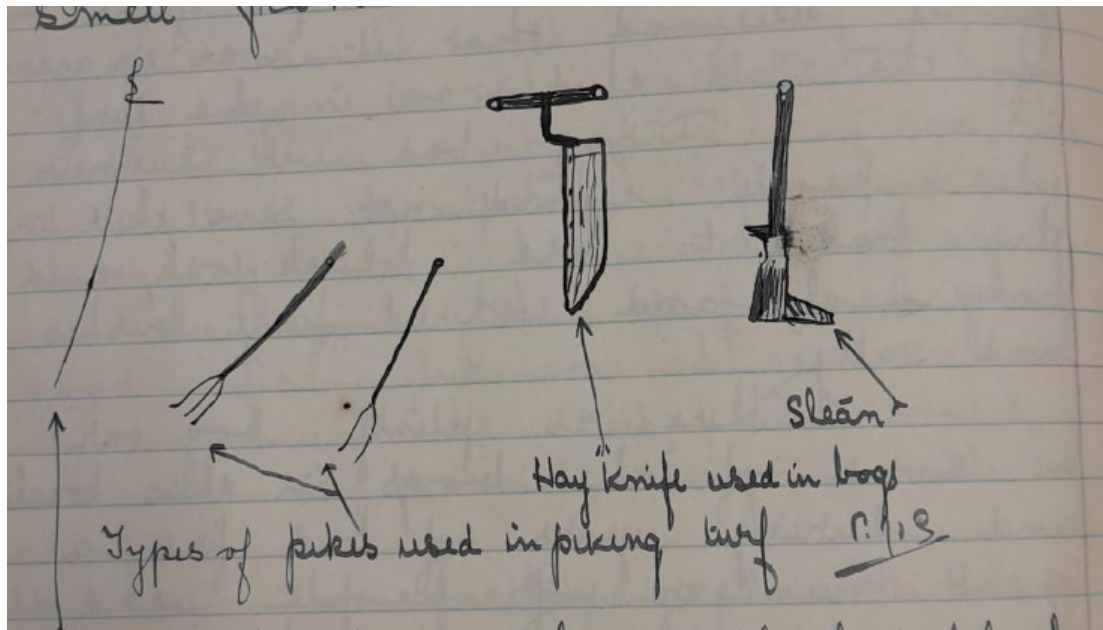


Figure 2.2 Sketches showing the different kinds of tools used in peat extraction in Lispole, County Kerry, in Michael O'Sullivan. MS Vol. 782 (1941), 450.

Working on the bog was physically difficult. Michael J. Murphy, a collector with the Folklore Commission, recorded the conditions of the work that were described to him in Tyrone in 1950. He wrote, “men or women “lifting turf” suffer from an ache and swelling in the wrists, hands and fingers the second and often the third day after they have begun the work.”³²² Murphy deemed it significant to record this physiological consequence of the work. Besides this, people also experienced pain in their legs, backs, and arms. Geographical distance from the bog further intensified the challenges of the work. Michael O’Sullivan recalled that some people “[had] to leave their homes at 3 o’clock in the morning so as they would arrive at the bog at a reasonable

³²² Murphy. MS Vol. 1216 (1950), 386.

time to start the days work. Then they work until nightfall and start off home when it is dark.”³²³

Limited infrastructure meant that these journeys were conducted either on foot or by donkey along paths or roads worn by human footfall.

The relentlessness and difficulty of the work featured in Walter Macken’s representation of life working on the bog, however, for Cahal it was also peaceful in its familiarity and repetitiveness.³²⁴ Positive impressions of the work feature in the Folklore materials. The seasonality of the work meant that peoples’ memories and recollections of it were of sunny summer days. And, because it was a co-operative task, a sense of community and even fun underlay peoples’ accounts. For example, Michael J. Murphy, again recording the experiences of bog work in County Tyrone, included a story recounted to him about a time on the bog where moments of joy emerged in the midst of work. He wrote, “...twenty or more families would be cutting – men, boys and girls. He said it was great fun. Someone would throw a lump of turf; someone would retaliate, all supportively, until “the whole bog was firing clods at one another.””³²⁵ This dynamic image of multigenerational workers experiencing enjoyment illuminates the shared enjoyment experienced during the peat harvest.

Knowledge of the materiality of the peatlands themselves was crucial for extraction. Each layer of the bog’s strata had a different composition. Therefore, each layer required a different approach and different kinds of work. The composition of each layer also informed the valuation of the peat that was extracted. Thomas Pierce, a farmer from Galway, illuminated this point in his testimony to a folklore collector in 1974,

“the ‘White Turf’ was overhead. That wasn’t much good. It was all ashes. ‘Brown Turf’ was second, an’ the ‘Stone [black] Turf’ underneath. ... The ‘bláin’ [scraw] was the top o’ the bog. You’d have to clane [sic] that away with the spade before you could use the

³²³ O’Sullivan. MS Vol. 782 (1941), 440.

³²⁴ Macken, *The Bogman*, 65.

³²⁵ Murphy. MS Vol. 1216 (1950), 386.

‘slane.’ The clanin’ [sic] was thrown into the bog hole to fill it so that you could bring out the next year’s turf.”³²⁶

Pierce demonstrated a system for valuing each layer, and the necessity of having to cut through the peat of poorer quality in order to reach the “stone turf.” Stone turf in this context refers to peat from the deepest layer of the bog, what in other places was known as ‘black turf.’ The maintenance of turbary bogs was also alluded to in Pierce’s testimony. These parcels of land could be passed from one generation to the next as long as there was peat to extract. Maintaining the working area required, as Pierce stated, the filling in of the floor on which the cutter was working with the scraw from the top of the bog. This protected the peat below until the next year’s harvest.

Peat was not only valued by rural people according to its material properties, but also within a wider fossil fuel economy. The value of peat was often expressed relative to coal. For example, “good ‘black turf’, nearly like coal,” “that was the best turf. ‘Twas as good as coal,” “here the turf is equal to coal”³²⁷ Coal was a feature of the energy economy in Ireland from at least the fifteenth century. Its cost and relative scarcity prohibited its widespread adoption amongst rural communities for whom proximity to peat was a determining factor in their fuel choice. This framework of valuation, however, suggests a metric of utility that was somehow related to pride, sense of place, and national identity. Coal was, after all, a British fuel and, particularly considering the context in which the Folklore Collection was being produced, peat was imbued with a national importance.

Materials from the Folklore Collection, as well as insights from Arensberg and Kimball, present a dynamic picture of a society where the extraction of fuel resources was an intrinsic part of the annual processes of subsistence. Nature, culture, and society interacted in a series of necessary and interdependent iterations. The realities of daily life for rural communities in Ireland

³²⁶ Thomas Pierce. MS Vol. 1862 (1974), 184.

³²⁷ Annie Anderson. MS Vol. 1862 (1974), 167; Pierce. MS Vol. 1862 (1974), 184; and David Nolan. MS Vol. 1177 (1950), 116.

prior to the establishment of the Turf Development Board in 1934 were such that peat was valued as a source of energy, a focal point for community, and a complex workplace that required inherited intergenerational knowledge and skills.

The rural peatland worksapes were a focal point for biological and ecological phenomena which shaped and were shaped by systems of human labour. These systems were not only built around this nature but also made and remade themselves through language, culture, and technology. But importantly, this labour was in service to extraction. The material impacts of turbary cutting were already visible in the maps of the Bogs Commission in the early nineteenth century.³²⁸ John Feehan and Grace O'Donovan, in attempting to estimate the impacts of hand-cutting peat on peat reserves in Ireland, suggest several figures. For instance, they write, "by the time Bord na Móna took over the great Bog of Allen in the Midlands, almost half of it had already been cutaway."³²⁹ They also claim that "the production of hand-cut turf by farmers peaked at well in excess of six million tons around 1926."³³⁰

It is challenging to estimate the real extent of extraction. Particularly considering the complexity of turbary ownership. However, within the testimonies of the Folklore Collection, it is possible to generate an impression of the extractive nature of this system. In 1935, Pat Williams from County Wexford recalled, "all turf they used burn. There usen't be much coal because money was too scarce. A lot of turf used be cut down in the bogs in Ballinbeg. But there was no turf cut there now with forty years or more."³³¹ Williams' awareness of the finite nature of peatlands was part of the relationship between humans and nature, with bogs, in some cases, becoming "completely 'cut away.'"³³²

³²⁸ See Chapter One, John Longfield, *A Map of District no. Five*, 1811. NLI 16 D.20.

³²⁹ Feehan and O'Donovan, *The Bogs of Ireland*, 2.

³³⁰ Feehan and O'Donovan, 2.

³³¹ Pat Williams. MS Vol.54 (1935), 278.

³³² Mrs. B. Ryan. MS Vol. 407 (1937), 293.

III. The hand-won schemes

As discussed in Chapter One, the introduction of policies and legislation by the Fianna Fáil government in the 1930s was the beginnings of an attempt to establish a more formalised system for the large-scale extraction of peat from peatlands. The hand-won schemes were a top-down system of organisation and management that framed peatlands within a wider national discourse about progress, opportunity, and energy security. In this section, the period from the beginning of the Turf Scheme in 1932 until the establishment of Bord na Móna in 1946 is examined to identify the changing relationships between nature and labour on Irish peatlands. This period was a transitional phase in the industrialisation of peat extraction in Ireland.

The limitations of state and institutional power meant that the execution of the schemes was ad hoc, reactive, and ultimately limited. However, these schemes are necessary to demonstrate how waged labour, increased scales of production, standardisation, and mechanisation would all become features of the peatland workscape in the twentieth century. Included in the category of hand-won schemes are the County Schemes, which began in 1932 and were subsequently expanded during the Second World War; the Turf Development Board works, which began in 1936 at Lyreacrompane, Clonsast and Turraun; and the Kildare-Offaly Scheme which began in 1941.³³³ While all of these schemes had certain unique organising features, they nonetheless formed an overall system wherein the expansion of peat extraction generated new relationships between labour and nature.

In order to understand the perspectives of state and institutional actors, archival sources are utilised. However, in order to make visible the perspectives and experiences of workers during this period, existing oral histories, workers' newsletters, and local histories are essential. The Irish Life and Lore Oral History Archive contains a repository with hours of interviews with former peatland

³³³ The County Schemes featured a more decentralised form of organisation that was coordinated through local councils. This will be examined in detail in Chapter Three.

workers in their ‘Bord na Móna Collection.’ Jane and Maurice O’Keeffe, the founders and interviewers of the archive, express their intentions with this work as such, “the unique Irish voice, in all its depth, breadth and intonation is a very precious resource.”³³⁴ The interviews with peat workers were conducted in 2009, and as such, the passage of time has influenced the interviewee’s beliefs and impressions of their experiences. Nevertheless, in order to gather an impression of workers’ experiences, these sources provide important insights.

As well as this, a Turf Development Board- produced newsletter called *An Sleán* provides another glimpse into the lived experiences of workers. This periodical was produced for workers in the Kildare-Offaly Scheme by the Board from 1944 to 1946. While its intentions were the promotion of state interests, it nonetheless is a crucial repository of stories, poems, and photographs that bring these schemes to life. A further avenue for the perspectives of workers and ordinary people during the implementation of the hand-won schemes are local histories, including the Lyreacrompane Journal, and publications relating to Clonsast and Boora. These materials have the advantage of preserving local histories through memory and connection to place and community.

The national economic context of the establishment of the hand-won schemes was an important contributor to their appeal for workers. The ways in which the hand-won schemes were publicised and promoted shaped peoples’ expectations of the work. The material realities of employment for labourers at the time meant that emigration was an ever-present reality.³³⁵ Instability in the agricultural sector as a result of Fianna Fáil’s ‘economic war’ with Britain in the

³³⁴ “About Us,” Irish Life and Lore, Accessed 4 May 2022, <https://www.irishlifeandlore.com/about-us-and-our-work/>

³³⁵ Catriona Curtis, “The Agricultural Labourer and the State in Independent Ireland, 1922-76” (Maynooth, NUI Maynooth, 2007).

1930s meant that those typically employed as farm labourers in the west of Ireland in particular were left without work.³³⁶

Quoted in the *Irish Press*, Seán Lemass stated,

“the work would provide immediate employment. This would increase each year. In the course of the present year an average of 130 men would be employed. In the second year that would increase by about 100 men, and the following year to something less than 400. When the bog was in full production it was estimated that 600 would be employed in seasonal operations, and 200 all the year round permanently.”³³⁷

This statement reflected the nascent industry’s growth-oriented ambitions. During interviews, workers reflected on their expectations and hopes when joining the Board. John ‘Davey’ Nolan, a locomotive driver on the Lyreacrompane scheme in County Kerry, said that “there wasn’t much here before the war. I’d have taken the boat but for it.”³³⁸ Mark Nugent, a drain-digger in the Derrygreenagh Bog in County Offaly, said that he was excited for a job on the bogs because he “was after coming from working farmer to farmer, you know, plenty of abuse and not a lot of money . . . so I felt very happy about it, even day one.”³³⁹ John Clohessy, who was an orderly in the Timahoe scheme in County Kildare, was looking for a better kind of work, “I said I wasn’t going back to the farm again. So, Newbridge was the only alternative for me. Bord na Móna.”³⁴⁰

³³⁶ Paul Rouse, *Ireland’s Own Soil: Government and Agriculture in Ireland, 1945 - 65* (S.I: Irish Farmers Journal, 2000), 13–20.

³³⁷ “£195,000 To Develop Bog,” *Irish Press*, July 1, 1936.

³³⁸ John ‘Davey’ Nolan. ‘Bord na Móna Collection.’ *Irish Life and Lore*. 2009.

³³⁹ Mark Nugent. ‘Bord na Móna Collection.’ *Irish Life and Lore*. 2009.

³⁴⁰ John Clohessy. ‘Bord na Móna Collection.’ *Irish Life and Lore*. 2009. (Clohessy began working at Timahoe in 1944, before the Turf Development Board was renamed Bord na Móna.)

These reflections all speak to a mindset that was prevalent amongst labourers; there was limited work available and the work that was, was primarily agricultural which had its own challenges and drawbacks. Historian Dan Bradley describes the realities of the working conditions of farm labourers in Ireland during this period. With no fixed working hours or standards of employment, many labourers were subject to abuse and poor conditions.³⁴¹

It is unsurprising, then, that the opportunities promised by the Board were attractive. Workers' feelings about the hand-won schemes sometimes reflected the 'crusade' mentality of the FF administration. In a song remembered by a community member in Lyreacrompane, the mission of the work was presented in militaristic terms. The gathering of forces of labourers from across the county of Kerry represented a significant accomplishment. Published in the Lyreacrompane District Journal in 1990, a verse of the poem reads,

"So we'll gather a mighty army
An army of dolemen
They'll eastwards hail from Abbeyfeale
And westwards from Kilflynn
They'll northern come from Ballyduff,
Kilmore and Liscullane
And we'll bring 'em down from Renagown
To the bogs of Lyreacrompane."³⁴²

This verse further speaks to the new expectations of peat extraction. The transposition of workers to the bogs transformed the spatial dimension of the peatland workscape by significantly expanding it beyond the reaches of turbary, or even community bogs. This was further evident in a poem published in 1946 in the Turf Development Board's newsletter, *An Sleán*. The author,

³⁴¹ Dan Bradley, *Farm Labourers: Irish Struggle, 1900-1976* (Belfast: Athol Books, 1988), 15–18.

³⁴² Unknown Author, 'The Bogs of Lyreacrompane.' *The Lyreacrompane District Journal* 1 (1990),

Thomas Gleeson, was reflecting on the experience of travelling to and arriving at the Kildare-Offaly Scheme,

“It was on the seventh day of May, a day I will ne’er forget,
I stepped on the bus at White’s Hotel, My throat with whiskey wet,
I was leaving dear old Limerick, my living for to earn,
Upon the bog of Allen, in the County of Kildare.

To the Turf Board office in Newbridge that evening I did go,
I was asked if I had been there before, and of course I answered “no.”
The Manager then came to me saying “there’s a welcome here for you, and I hope you’ll
never forget the day,
You came to Droichead Nua.”³⁴³

The necessity for many workers to migrate to the various sites of the hand-won schemes coloured their expectations about what the experiences would entail. While the optimistic tone of this poem was typical of the publication, there was also sadness at the farewell to Limerick, and anticipation at the new opportunities ahead.

The scale and material composition of the sites being developed also framed the nature of the labour that was required. Clonsast, for example, was 4000 acres of raised bog in County Offaly and was the first site purchased by the Board in 1936. According to C.S. Andrews, its proximity to the Barrow River drainage scheme meant that much of the necessary machinery and infrastructure required for peat development was already in place.³⁴⁴ The workforce here was composed of local farmers and unemployed men, from the west of Ireland in particular.³⁴⁵

³⁴³ Thomas Gleeson, ‘The T.D.B. Hotel.’ *An Sleán* 2, no. 22 (1946), 3. (Droichead Nua = Newbridge).

³⁴⁴ Andrews, *Man of No Property*, 248.

³⁴⁵ Marian Curry. ‘The Socio-Economic Impact of Bord na Móna on the East Midlands.’ *Occasional Papers* 7. (Maynooth: Geography Department, 1987), 1; and Clarke. *Brown Gold*, 34.

Lyreacrompane was a 1600-acre bog in North Kerry also purchased by the Board in 1936. Andrews cited the uphill nature of this blanket bog as part of its appeal, with drainage works requiring much less intervention as gravity, he claimed, could do much of the work.³⁴⁶ Employees were made up of the local population and seasonal workers brought in from around the county and as far away as Limerick.³⁴⁷ Some of the seasonal labour was conducted by members of the Traveller community. German engineers were employed on all of the schemes as a limited fleet of machinery was introduced in the late 1930s.

Despite the introduction of machinery in Clonsast and Lyreacrompane, fuel shortages faced during the Second World War forced the Turf Development Board to expand their hand-won peat schemes. It was necessary to extract peat from the abundant peatlands in the midlands due to their proximity to Dublin which was struggling significantly with fuel resources during the war. In Counties Kildare and Offaly, this meant the acquisition of thousands of acres of bog.³⁴⁸ As a consequence of labour shortages in the areas around these bogs, for the Kildare-Offaly Scheme, workers were recruited from all across the island of Ireland. Particularly unemployed tradesmen in cities, and young men, again from the west of Ireland.

An advertisement in 1942 promised, “free transport will be provided from the workers’ home areas to the camps in which they are to reside. Return fare will be paid in respect of a worker whose period of employment lasts for 4 months or over.”³⁴⁹ Fourteen camps were constructed on this scheme and maintained, with roads and rail infrastructure developed to support the works.³⁵⁰ The peak total number of workers living in the camps in 1945 was 5,138. Geographer Marian Curry, in her study of the economic impacts of Bord na Móna on the east midlands, estimates from

³⁴⁶ Andrews, *Man of No Property*, 249.

³⁴⁷ J. Sugrue. ‘Bord na Móna in Lyre.’ *The Lyreacrompane District Journal* 1(1990), 9.

³⁴⁸ Curry. ‘The Socio-Economic Impact of Bord na Móna on the East Midlands,’ 11.

³⁴⁹ “Turf Workers Wanted,” *Irish Independent*. May 5, 1942.

³⁵⁰ Curry. ‘The Socio-Economic Impact of Bord na Móna on the East Midlands,’ 11.

sample data that the majority of workers in the Kildare scheme camps were from Dublin, Tipperary, Cork, Limerick, Mayo, Galway, and Kerry.³⁵¹ The workers were primarily unemployed single men with an average age of 27-28 years.³⁵²

When these men arrived at the sites of the hand-won schemes, they were confronted with the realities of the work required of them. Feehan and O'Donovan have written that "water is the very life of the bog."³⁵³ The anaerobic conditions under which sphagnum turns to peat requires peat landscapes to be completely saturated. The challenge, then, for extracting fuel from this landscape is dehydrating the bogs sufficiently to be able to access the peat. In order to facilitate peat extraction on the scale imagined by the architects of the hand-won schemes, networks of drains had to be dug across the peatlands to reduce their high water-content.³⁵⁴ This process mirrored the recommendations of the Bogs Commission nearly 100 years earlier and indeed, the maps produced by the Commission were employed in developing the layout of drainage channels.

The process of drainage in the beginning of the hand-won schemes was done entirely by hand. This meant simply that large groups of men with shovels cut trenches into the bog. Mark Nugent, reflecting on his time digging drains by hand in Derrygreenagh Bog, albeit in the 1950s, remembered that "parts of the bog were that bad, you'd be nearly wasting your time, the bog would be coming up behind you with solid water."³⁵⁵ The work was messy and wet. Nugent recalled the "rough" conditions, where the work would be done throughout the year, including in the harsh winters. The resistance of the peatlands to development was perhaps most visible in this battle against the water.

³⁵¹ Curry, 14.

³⁵² Curry, 13.

³⁵³ Feehan and O'Donovan. *The Bogs of Ireland*, 396.

³⁵⁴ Feehan and O'Donovan, 16.

³⁵⁵ Mark Nugent. 'Bord na Móna Collection.' *Irish Life and Lore*. 2009.

For workers, the physical and psychological struggles of this drainage work are visible in the Minister for Industry and Commerce Seán MacEntee's 1940 report on the Clonsast Scheme. He wrote,

"..I had an opportunity of observing the immense amount of drainage work which has already been done on the bog and the large network of power distribution lines which had already been erected. The lay-out struck me as being well planned. I was informed that over 340 men were employed on the bog, of whom close on 300 were at that time actually working on it. I only noted during the whole course of the 4-mile run, about 15 people, the other workers being concealed by the trenches and drains in which they were at work. The fact that so much of the work on the bog is carried out below ground level, coupled with the vast expanse of the bog, makes the problem of supervision an extremely difficult one, and it is for this reason that the workers on the bog are employed on piece-work rates. It is, moreover, imperative, if the bog is to be developed on a commercial basis, that a minimum output should be required from each worker, and that this output must be of a substantial size. The principal impression formed during this run was of the extreme desolation of the bog; a condition which must naturally have its psychological reactions upon those working on the bog and to that extent further complicate the labour problem for management."³⁵⁶

MacEntee's observations shed light on a number of important features of the nascent industrial peat workscape. It highlighted the ways nature was changing alongside labour. The hydrology was being disrupted, of course, but also new infrastructure like power lines and light rail began to populate the vast peatland. For workers, the nature of the work necessitated a new positionality within the trenches of the drains. Their bodies were submerged within the environments of their work and subject to the material consequences of this, that is, flows of water and saturated peat.

As well as this, MacEntee highlighted the number of workers at Clonsast and the fact that, despite their quantity, the vastness of the peatlands within which they were working often meant isolation and invisibility. That this was a problem for the organizing structures of the industry was

³⁵⁶ Seán MacEntee. Memo, dated April 4, 1940, "Memorandum on visit to Clonsast bog." NAI TSCH/3/S9597.

evident in his remarks on the difficulty of supervising such a disparate workforce. This lack of discretion was a new feature of the peat workscape with performance and efficiency as the underlying conditions of employment. Work was compensated on a piece-work rate. This meant that the amount of money a worker would receive was directly related to their material, quantifiable impact on the land. In Clonsast, this rate was “6d [6 pennies] per perch of trench dug.”³⁵⁷ Workers in Clonsast went on strike over this rate in 1937 and negotiated a 1 penny per perch increase.³⁵⁸

A challenge for the Turf Development Board was the length of time required for the bog to be workable, that is, productive. It was understood that the process of drainage had to be undertaken slowly, with bogs not being sufficiently dry enough to extract peat for several years.³⁵⁹ These guidelines had been established by the Bogs Commission. The timeline of extraction was dictated therefore by the physical conditions of the peatlands themselves.³⁶⁰ Through processes of experimentation and trial and error, the workers and supervisors came to understand the bogs better, and over time became more efficient at the large-scale transformation of peat landscapes and hydrology. In 1937, an article from the *Irish Press* described the drainage plans for Clonsast and what it was hoped would be achieved by them, “the Turf Development Board’s ambitious scheme for Clonsast provides for the making of 200,000 yards of main drains and 394,000 yards of cross drains to dry the surface on which the turf will be spread, and to ensure that the bog will sink at a uniform level.”³⁶¹ Yards of drains cut and tons of peat extracted were common features of media

³⁵⁷ Richard J. Mullins, *A History of Portarlinton Generating Station and Clonsast Bog Development* (Portarlinton: Richard J. Mullins, 1993): 23. A *perch* was 5.5 yards or 16.5 feet.

³⁵⁸ Mullins, 23.

³⁵⁹ Clarke. *Brown Gold*, 34.

³⁶⁰ Clarke, 34.

³⁶¹ “Work on £200,000 Turf Scheme,” *Irish Press*, January 14, 1937, 6.

reporting on the schemes at the time. Reports devoted considerable time to the quantitative achievements of the work.³⁶²

In his autobiography, C. S. Andrews described the early efforts to dig drains at Clonsast.³⁶³ Workers adhered to the specifications of German drainage that Andrews and his colleagues had observed when visiting peat industries in Europe. The recommendations from German experts called for drains with vertical sides which, when imported into the Irish context, were unstable and collapsed. A local man named Pat Gorman, who had risen to the rank of foreman in Clonsast, told Andrews “the bog cannot be rushed.”³⁶⁴ He implemented a system of drain cutting that happened slowly, and in stages, with the drains being cut at an angle to prevent their collapsing in on themselves. He took into account the specific conditions of this Irish bog and consequently the drainage improved. They found success across Clonsast with this method, and it was applied across other Irish bogs. The method of hand cutting drains proved successful in the early years of peat development. By 1937, 530,000 yards of drains had already been dug at Clonsast and, according to local historian Richard Mullins, “all 500 miles of drains [in Clonsast] were manually dug with short, crutch handle shovels and up to 600 men were employed there at the outbreak of World War II in 1939.”³⁶⁵

Once drainage works had been completed, the work of extracting the peat began. Human labour, in the form of hand-won peat cutting was the foundation of these schemes. Throughout the course of the hand-won schemes, the use of the sleán was necessary. In Kildare, the wing breast sleán was used. In Lyreacrompane the vertical sleán was used, as the nature of the blanket bog there facilitated this approach. Labour on the bogs could include a forty-eight-hour work week

³⁶² “Turf Development Scheme,” *Irish Press*, January 15, 1937, 8.

³⁶³ Andrews, *Man of No Property*, 250-251.

³⁶⁴ Andrews, 253.

³⁶⁵ “Work on £200,000 Turf Scheme,” *Irish Press*, January 14, 1937, 6; and Mullins, *A History of Portarlinton*, 23.

wherein each worker was a part of a team of ‘cutter’, ‘catcher’ and ‘wheeler.’³⁶⁶ Each person had a specific role within the workforce, making it not dissimilar to the organisation of the meitheal, but on a much larger scale.

In Lyreacrompane, approximately 10,000 tons of peat per year were cut by hand.³⁶⁷ In the Kildare Scheme, between 1943 and 1947, approximately 600,000 tons of peat were cut by hand.³⁶⁸ The value of the workers’ ability to be efficient and productive can be seen in an article in *An Sleán* describing Christopher Daly, a 21 year old man from Kerry referred to as “a human machine.”³⁶⁹ According to this article, Daly was able to produce 98 sods of peat per minute by hand, eight hours a day, six days a week. The practice of hand-winning peat was a continuity of practice and knowledge from the turbary system where the skills that many of the workers already had when arriving at Turf Development Board bogs proved valuable for them in their new working lives.

Despite the ultimate dominance of hand-winning as the method of extraction on these schemes, The Turf Development Board introduced machinery for peat extraction and collection at its sites in Lyreacrompane and Clonsast. Following the 1935 delegation to Germany and the Soviet Union, Andrews and his colleagues had made a recommendation for the use of a “mechanical excavator and spreading machine” which they had observed at an peat-works in Meppen, Germany.³⁷⁰ While the machine in Germany was operating in shallower depths of peat of maximum 4.5 metres, the report recommended that this could be adjusted for Irish conditions. In

³⁶⁶ Curry. ‘The Socio-Economic Impact of Bord na Móna on the East Midlands,’ 13.

³⁶⁷ Sugrue. ‘Bord na Móna in Lyre,’ 9.

³⁶⁸ Clarke. *Brown Gold*, 56.

³⁶⁹ “A Human Machine.” *An Sleán* 2, No. 21. (1946), 4.

³⁷⁰ C. S. Andrews et al., “Report of Peat Delegation to Germany and Russia,” 1935, 11. ESBA.

certain midlands bogs, peat depths could reach 10 metres.³⁷¹ Andrews and the peat delegation highlighted mechanical failure stoppages and rates of piece-work paid to German labourers.³⁷²



Figure 2.3 Bagger spreader arm, in *An Sleán*, 2, No. 22 (1946), 3.

The machine was produced by the German company Klassman and was known as a *bagger*. In 1938, a Klassman bagger was delivered to Clonsast and was brought into operation on the bog in 1939. The bagger was essentially a tractor fitted with a series of buckets on a chain. These buckets cut down vertically through all the layers of the bog and macerated peat from each layer into a single uniform pulp which was then spread out over a drying area, cut by rotating disks, and left to dry.³⁷³ Figure 2.3 shows a bagger spreader arm with the rows of peat laid out on the drying plain, having just been cut by the rotating discs. It was driven by an electric motor which was connected to overhead power cables. Under favourable conditions, dry bog surface and

³⁷¹ Andrews et al., “Report of Peat Delegation,” 5.

³⁷² Andrews et al., “Report of Peat Delegation,” 5.

³⁷³ Clarke. *Brown Gold*, 9.

good weather, the bagger was capable of producing up to 20,000 tons of peat per year, operating 8 hours per day.³⁷⁴

The introduction of machines led to significant transformation of the peat workscape. The materiality of the peat itself was fundamentally altered through the collapsing of the individual strata of peat into one uniform product, that is, *machine turf*. For workers, mechanical knowledge and expertise became a new valuable skill. Alongside this technical expertise, however, pure physical labour was still a fundamental part of their working lives during this period. The baggers caused significant challenges for workers, by virtue of their mass and their initial unsuitability to Irish conditions. This was evident in the report of Seán MacEntee on Clonsast in 1940, who observed a large group of men working on one of the machines in the bog,

“the normal team for this machine was four or five. The necessity for employing so many extra hands on the machine arose from the fact that the bog surface was so soft that the spreader arms tended to sink in the bog, and that the excavator arm had to work on such a slope that the scoops which were working on a slope had to be partially filled by hand-labour, for which purpose four or five men were continuously employed shovelling the turf into the scoops.”³⁷⁵

In this initial phase of mechanisation then, extra human labour was necessary to maintain the functioning of the bagger. The position of the workers bodies in the path of the operating machine was incredibly dangerous and the work was difficult. This is shown in figure 3.4 where two workers are pictured standing in the peat bank shovelling peat into the buckets of the bagger.

³⁷⁴ “Note,” *An Sleán*, 2. No. 22 (1946), 3. According to Richard Mullins, “On consolidated and timber-free bog it could excavate 120 cubic metres of peat per hour.” In Mullins, *A History of Portarlinton*, 26.

³⁷⁵ MacEntee, “Memorandum on visit to Clonsast bog,” 2.



Figure 2.4 Workers shovelling peat into bagger; in *An Sleán*, 2, No. 22 (1946), 3.

Another challenge was the occurrence of tree timber in the depths of the bog itself. These materials would often get stuck in the bagger and had to be manually removed. The machines were also susceptible to sliding or tipping into drains and trenches which further placed workers at risk.³⁷⁶ Workers over time developed solutions to the problem that the bog did not support the weight of the machine. Tracks of timber were laid down for the machine to drive over and this distributed the weight more evenly. During the Second World War, the importation of expertise and materials from Germany was halted and so breakdowns and mechanical failures, which frequently occurred, were either addressed by workers and engineers on the Turf Development Board staff or left unresolved. This inconsistency in the availability of mechanised extraction put further pressure on the production of hand-won peat to meet the fuel needs of the country at the time.

³⁷⁶ Mullins, *A History of Portarlinton*, 26.

In an article titled ‘The Measure of Turf,’ Lyreacrompane local historian Joe Harrington describes the diversity of means for measuring peat sods or working bog areas based on his own experiences, research, and the recollections of community members.³⁷⁷ He details the diversity of ways of measuring hand-won turf, with a ‘sleán’ measure varying widely amongst different peat cutters. He described the tension that the imposition of standard units of measurement introduced during the hand-won schemes.

For example, Harrington describes a ‘floor’ of turf as an area of the drying field that held 32,000 sods. These then had to be footed two on two, four rows high on top of each other. Footing was still a significant feature of this system of peat production. And, while this work had historically been relegated to women and children, which continued to some extent in Lyreacrompane, in the midlands schemes, the majority of the workforce were men who struggled significantly with the physicality of the work.³⁷⁸ Joe Harrington describes the work of footing as such, “the job required 484 foots be made per hour. This involved handling over 60 sods per minute or one per second. The work was back breaking, and the black turf would rip the less weatherbeaten hands, but payment was by the “floor”, so it was up to each worker to set his or her own pace.”³⁷⁹ The piece-work method of compensation was a feature of all aspects of peat extraction during this phase, in an attempt to overcome issues of supervision.

Another machine which was introduced in both Clonsast and Lyreacrompane was a sod collector which was intended to reduce the labour required for the collection of sods from the drying field. This task was semi-automated with the sods initially having to be footed by hand, and then when they were sufficiently dry, they would be loaded using shovels onto the conveyor belt of the sod collector which would transfer them into clamps or ricks at one end of the bog.³⁸⁰ An

³⁷⁷ Joe Harrington, “The Measure of Turf,” *Lyreacrompane and District Journal* 5 (1997), 40–41.

³⁷⁸ Clarke. *Brown Gold*, 36.

³⁷⁹ Harrington, “The Measure of Turf,” 40–41.

³⁸⁰ “Note,” *An Sleán*, 2. No. 22 (1946), 3.

article in the *Kerryman* from 1939 discussed the impact of the sod collector on labour in the Lyreacrompane works,

“It is believed that the use of this particular machine will do away with a lot of the labour which had been required to collect the “saved” fuel, but as the labourers who had been engaged in this type of work had to carry the turf in baskets on their backs, very few will grumble at the cessation of the system which operated last year. However, there is plenty of work available in connection with other operations carried out at the scheme so the workmen will not be sorry to be relieved of the old form of turf collection.”³⁸¹

The transition from physical labour to mechanised labour was presented in a positive way. The scale of peat being extracted meant that the manual jobs which had been part of the turbary system were more intensive. Therefore, the idea that part of this labour could be mechanised was welcomed.

The final significant transformation to the system of peat extraction on the hand-won schemes was the introduction of a light-rail network transport workers and peat across the peatlands. This network was linked to the national rail system, where the peat sods were transported around the country, in particular to Dublin. Coal shortages during the war greatly restricted the functioning of the national rail networks, however, and so lorries were also introduced to transport peat from the bogs.³⁸² Fossil fuel-powered machinery was beginning to replace the work of human bodies while simultaneously introducing new kinds of work.

Locomotive drivers were more technically skilled and had to be able to conduct certain repairs. It was more isolated work but was less manually demanding and meant less exposure to

³⁸¹ “New Sod Collecting Machine,” *Kerryman*, August 5, 1939.

³⁸² Peter Rigney, *Trains, Coal and Turf: Transport in Emergency Ireland* (Dublin; Portland, OR: Irish Academic Press, 2010); “The first locomotive to operate in Lyreacrompane Bog was a Windhoff Diesel which was made in Germany and ship[ped] to Lyre via Cork in 1938.” In “Loco in Lyre,” *Lyreacrompane and District Journal* 8 (2005), 6.

the elements.³⁸³ It also involved risks, however, with accidents occurring on account of the operation of the locomotives. John Davey Nolan described how a man had gotten caught in the path of the loco and had his arm “mangled.”³⁸⁴ Despite this, the impact of the industrial additions was lauded in the media. An article in the *Kerryman* from 1939 observed, “the bog . . . an eyesore to the progressive farmer, has been transformed into a little local Klondike providing bread and work for all placing the area on Ireland’s industrial map.”³⁸⁵

Accommodations were provided by the Board where the influx of workers to peatland sites necessitated. This concentration of labourers on industrial peatlands produced a new kind of community at the sites of extraction. Overall, populations increased in the regions surrounding Turf Development Board works. Evidence of this comes from Marian Curry’s study, which shows an increase in population in the Edenderry District in County Offaly from 6,563 inhabitants in 1936 to 8,186 inhabitants in 1946.³⁸⁶ In the absence of permanent settlements, the challenge to house migrant workers in these regions was significant. The Irish government had presented a vision of a new way of life in peatland areas that was attractive and appealing to unemployed young men around the country. The material and physical attributes of these landscapes acted as a draw both for politicians and workers. The entanglements of the economic decisions to migrate with the personal and cultural beliefs about opportunity and dignity in work resulted in the beginnings of a new community in Irish peat spaces, organised around the extraction of peat on a large scale.

The development of the hand-won schemes was ad hoc and responsive to the outcomes of political decision-making. In Lyreacrompane, for instance, it was possible to mostly procure the workforce from surrounding areas. Later challenges to this system, such as labour shortages in the

³⁸³ John ‘Davey’ Nolan. ‘Bord na Móna Collection.’ *Irish Life and Lore*. 2009.

³⁸⁴ Nolan.

³⁸⁵ “A Local Klondyke,” *Kerryman*. November 4, 1939.

³⁸⁶ Curry. ‘The Socio-Economic Impact of Bord na Móna on the East Midlands,’ 9.

1950s, were met with increased transport infrastructure.³⁸⁷ Investment in lorries to access a wider catchment area was prioritized over building hostels or housing. For local people in Lyreacrompane, the scheme had a significant impact on the local economy, transport networks, and social life. Local G.A.A. teams were significantly boosted by the addition of the workforce. Ultimately, the workscape was limited to the spatial parameters of the catchment area and did not become a catalyst for the major development of community infrastructure like housing and public buildings. By the time the works at Lyreacrompane had ceased in the 1960s, besides the cutaway bog, there were few marks on the landscape to indicate the activities that had occurred there.

The context of the Kildare scheme made the limited infrastructural development found at Lyreacrompane impractical. The peatlands were too vast, and the labour requirements were too great to procure from the disparate and poorly resourced local settlements that existed on the peatland boundaries. Therefore, workers were housed in barracks. There were 12 beds per dwelling. John Clohessy was the head orderly at the Timahoe Camp, and described the set-up as “army style,” reflective of both the context of the war, and the responsive nature of the camps’ establishment.³⁸⁸ The workers received fried breakfasts and meat and potatoes for dinner. Clohessy described it as “good, substantial food.”³⁸⁹ The primary needs of food and shelter were provided for as part of the objective to “provide a clean and happy home for the camp occupants.”³⁹⁰

There was also a significant effort to foster a sense of camaraderie and community that can be seen in *An Sleán*. In an editorial in 1946, the newsletter was presented as a unifying force for the workers, helping them to feel part of a community despite the geographically disjointed nature of the camps. “From Glencree to Turraun it is over seventy miles, and in between are located twelve Camps, scattered over an area of 100 square miles. Yet, by means of ‘An Sleán’ every one of the

³⁸⁷ Sugrue. ‘Bord na Móna in Lyre,’ 9.

³⁸⁸ John Clohessy. ‘Bord na Móna Collection.’ *Irish Life and Lore*. 2009.

³⁸⁹ Clohessy.

³⁹⁰ “Spring Cleaning,” *An Sleán*, 1, No.14 (1945), 4.

Scheme's thousands of workers has been, and is, enabled to get a bird's eye view of the Scheme as a whole."³⁹¹ This statement reflected an attempt by the Board to situate the workers within the wider project of peat development, describing the scale of the scheme and their centrality within it. It further broadened the spatial dimension of the peat workscape. Community building was encouraged through the organization of social events such as sports clubs, drama groups, film screenings, dances for camp workers and members of local communities, concerts, card games, and Christmas dinners for the workers who remained on the Camps over the wintertime.³⁹²

The Board organised cultural activities which contributed to the reproduction of the ideological aims of not only the hand-won schemes, but also broader government ambitions. For example, in an editorial in 1944, the newsletter spoke to the ideological beliefs underpinning the running of Irish language classes in the Camps. It read, "the Taoiseach has emphasized that together with all the vast development of the country planned and underway, we must not forget that to learn Irish is just as important as any of the great schemes proposed."³⁹³ Studying the Irish language, playing Gaelic games like football, hurling and handball, and attending Catholic mass services were all integral parts of life in the camps.

Another crucial component of the reproduction of the values and priorities of the Irish government and the Turf Development Board in the camps was the annual turf-cutting competitions. These were highly anticipated events with constant promotion in the pages of *An Sleán*. Contests which considered the "highest output, shape of sod, neatness of spread and neatness of bog hole" were all included in the programs of events.³⁹⁴ The emphasis in these competitions was on the skills and cooperation of hand-won peat extraction practices. These events were presided over by leaders within the peat development community such as Frank Aiken, C. S.

³⁹¹ Editor. 'An Sleán,' *An Sleán*, 2, No.22 (1946), 3.

³⁹² *An Sleán* (1944-1946).

³⁹³ Editor. "Encouragement," *An Sleán* 1. no.6 (1944), 2.

³⁹⁴ "Annual Turf Cutting Competition," *An Sleán* 2, No.22 (1946), 3.

Andrews, and Éamon de Valera. Attendance by these political figures at the competitions underscored the national importance of the project of peat development.

Despite the optimistic tone of *An Sleán*, camp life was challenging. According to Marian Curry's study, besides the seasonal fluctuations of workers on the ground, the rates of staff turnover were significant.³⁹⁵ Workers gave several reasons for leaving the camps, including dissatisfaction with the work itself, other work opportunities, and poor pay. For some workers, a job with the Board was a temporary measure to save enough money to emigrate.³⁹⁶ For workers that stayed in the camps, C. S. Andrews recalled incidents of industrial action over issues of working conditions and the quality of the food.³⁹⁷

A considerable organizational challenge for the camps was maintaining the health of the workers. Val Martin recalls of the conditions in Boora, "dozens of men in one place, having come from all sorts of backgrounds, some of them were bound to be not too hygienic and clean."³⁹⁸ Special reports in *An Sleán* presented guidance for maintaining health and hygiene. These emphasised baths, frequent hand washing, fresh air in the barracks, and vigilance around the treating of cuts and scrapes.³⁹⁹ The workers were warned that illness "may mean the loss of several days [sic] work."⁴⁰⁰ The issue of hygiene was framed in religious and gendered terms in an editorial in *An Sleán* in 1944 to underscore the importance of sanitary practices in a way that was presumed to be meaningful to the workers. The editor wrote that "cleanliness is next to Godliness, but it is also an indication of manliness and inspires one with confidence and strength."⁴⁰¹ It's clear

³⁹⁵ Curry. 'The Socio-Economic Impact of Bord na Móna on the East Midlands,' 13-15.

³⁹⁶ Curry, 14.

³⁹⁷ Clarke. *Brown Gold*, 59.

³⁹⁸ Val Martin. 'Bord na Móna Collection.' *Irish Life and Lore*. 2009.

³⁹⁹ "Health," *An Sleán*, 1. No.6 (1944), 2; and "Health," *An Sleán*, 1. No.9 (1944), 1.

⁴⁰⁰ "Health," *An Sleán*, 1. No.9 (1944), 1.

⁴⁰¹ Editor. "Encouragement," 2.

from these reports that maintaining a healthy workforce was important to the administrators of the hand-won schemes.

The hand-won schemes were defined by their fluid nature. While job security was emphasised by the government, the labour force itself was far more transient. The transition towards a working environment that was governed by machines and industrial principles existed concurrently with a reinforcement of the practices of the peat harvest. Furthermore, the material realities of peatlands continued to influence and impact the ways that work was organised.

IV. Industrial peatlands

Ireland in the years following the Second World War was beset by economic and developmental challenges. The leadership of the FF government throughout the war cemented their power in the years following.⁴⁰² A continuation of isolationist policies, however, meant that the nation was largely excluded from the post-war boom experienced in Europe and the United States. The government's response to resource insecurity was a renewed investment in the peat industry. As discussed in Chapter One, Bord na Móna was established in 1946 with a mandate for the exponential expansion of peat extraction. The hand-won schemes had demonstrated that the mobilisation of human labour could yield significant results in the context of fuel scarcity and energy insecurity. The schemes had further shown that from an efficiency and economic perspective, the use of machinery in lieu of human labour had enormous potential to increase the productive capacity of Ireland's peatlands.⁴⁰³ Therefore, in the post-war era, financial and

⁴⁰² Brian Girvin, "Stability, Crisis and Change in Post-war Ireland 1945 – 1973," in Brendan Smith et al., eds., *The Cambridge History of Ireland*, vol. 4 (Cambridge; New York, NY: Cambridge University Press, 2018): 381–406.

⁴⁰³ "The experience of the Board has shown that hand-won turf cannot be produced on a large scale for sale economically on a commercial basis. It has, however, been demonstrated that mechanical methods of

geographical growth as well as increased efficiency through mechanisation were the driving principles of the industrial peat workscape.

The First Development Programme was a guiding framework for the company's operations in its first four years.⁴⁰⁴ It listed 24 sites either for expanded development, as in the cases of Lyreacrompane, Turraun, and Clonsast, or entirely new development. The new sites were located in Offaly, Kerry, Roscommon, Longford, Westmeath, Galway, Donegal, Tipperary, and Kildare. The works were projected to have an annual output of over 1 million tons of peat per year. By 1948, a Second Development Programme was submitted to the government for approval. The function of this, and its subsequent implementation as part of the Turf Development Act, 1950, was an increased advance of funding through the Irish exchequer for a doubling of the production of peat on existing and new Bord na Móna bogs.⁴⁰⁵

Within this context of increased pressure for expansion, and increased funding streams for the development and mechanical extraction of peat, human labour on the bogs became embedded in a new workscape that was spatially and materially different to previous systems of peat extraction. In figure 2.5, a map produced by Bord na Móna in 1953 shows the locations of the sites included in the First Development Programme (An Chead Chlár) and the Second Development Programme (An Dara Chlár).⁴⁰⁶ The concentration of sites around the midlands counties was a continuation of the hand-won schemes but the programmes also extended westward to more remote locations.

production can be used to produce a relatively high grade fuel which will provide a satisfactory substitute for coal when consumed in suitably designed equipment." In "The Turf Development Programme," (Dublin: Department of Industry and Commerce, 1946), 1.

⁴⁰⁴ "The Turf Development Programme," (Dublin: Department of Industry and Commerce, 1946), 4.

⁴⁰⁵ Turf Development Act, 1950.

<https://www.irishstatutebook.ie/eli/1950/act/23/enacted/en/html?q=turf&years=1950>

⁴⁰⁶ Bord na Móna, "Report for Bord na Móna and Accounts." (1953), 17.

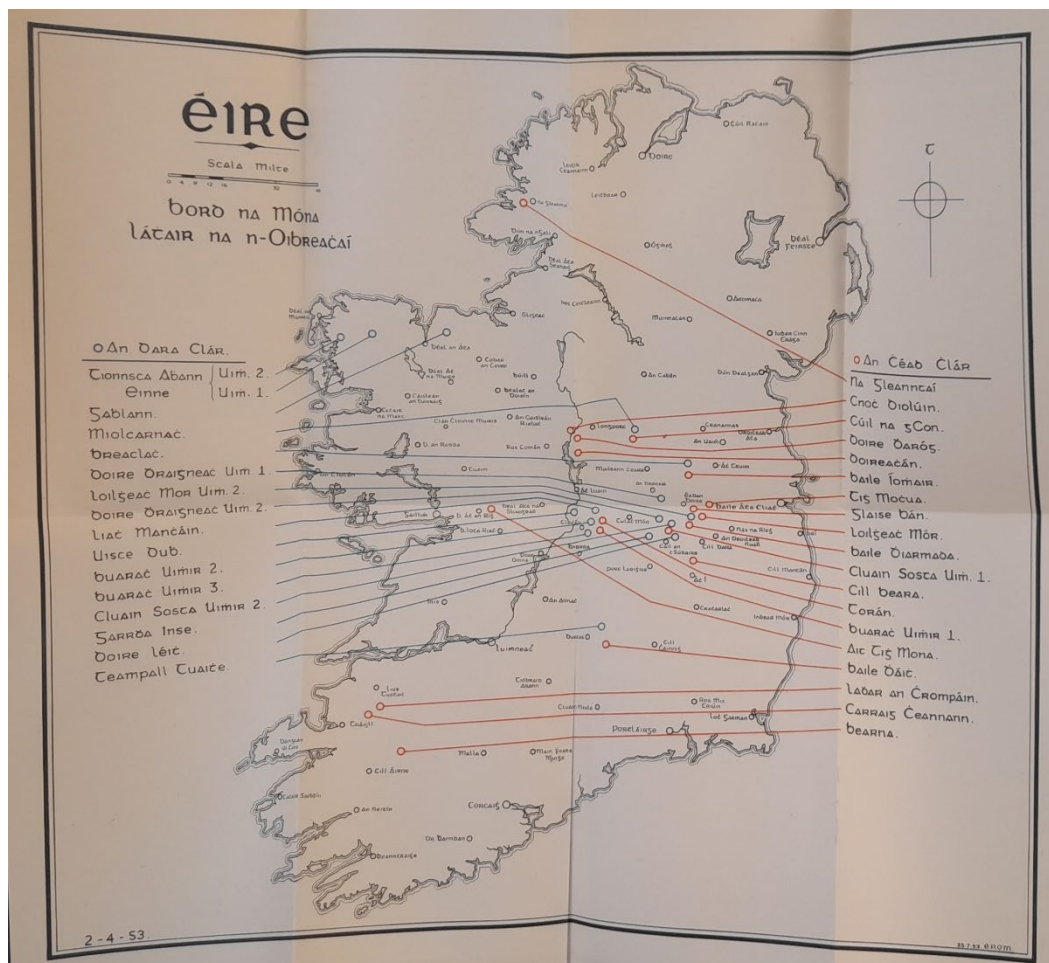


Figure 2.5 Map showing the locations of Bord na Móna works, in “Report for Bord na Móna and Accounts.” (1953), 17.

Housing development was also included as part of the Second Programme. The workers camps had been a means to support and house the large migrant workforce that was necessary in the midlands during the Kildare Scheme. The challenges presented by the nature of camp life were such that Bord na Móna prioritised the establishment of permanent settlements where the workers could become more embedded within their communities. The stability of peat jobs was emphasised in an article published in *An Sleán* in 1946. It read, “how does machine turf development affect workers on the Kildare scheme? The answer is that when the 1,000,000-ton target has been reached, constant all the year round employment will be available for about 3,400 men and seasonal employment for a further 3,400.”⁴⁰⁷

⁴⁰⁷ Aongus O Seachain, “Looking Forward,” *An Sleán*, 3. No.1 (1946), 1.

The opportunities for the permanent workforce were promoted in media from the Board throughout the 1950s and 1960s. In an advertisement in the *Connacht Tribune* in 1951, it was clear that the lifestyle associated with peat extraction had a new focus. The advert was calling for “2000 workers” and included a picture of a worker with the caption, “here is an engine driver on an Irish machine in the healthy air of the bogs at one of the machine works. Confident and happy, he has helped to bring in the turf harvest and has done a good job of work.”⁴⁰⁸ The advert goes on to highlight the opportunities of a job with Bord na Móna which included promotion, upskilling, year-round employment, and housing in their new villages where one could raise a family and settle down.

This advert captured several of the key dimensions of the direction of peat development at this time, as imagined by administrators of the Board. Working on the bogs was framed as a healthy and wholesome pursuit. Machinery and mechanization were the defining features of this new kind of work. Opportunities with the Board were annual, and one could have a lifelong career. Housing schemes were in development that could support a new kind of society in peatland regions, one based on family units. This was a marked departure from the “call to arms” tone of the hand-won schemes. The significance of these housing developments was greatly increased in the context of the 1950s economic downturn that Ireland experienced, wherein the value of “modern” housing rose substantially.⁴⁰⁹

The organisation of labour within the parameters of Bord na Móna’s operations remained a consistent challenge, despite a clear management structure from the beginning. As the industry grew however, the management frameworks became more sophisticated and demonstrated the

⁴⁰⁸ “2000 Workers Wanted,” *Connacht Tribune*. February 24, 1951.

⁴⁰⁹ Girvin describes one of the conditions which led to the economic crisis as such, “the failure of agriculture to sustain growth, output and productivity. The land could no longer provide the means to employ those born in rural Ireland and without jobs elsewhere they emigrated.” In Brian Girvin, “Stability, Crisis and Change,” 396.

influence of the industrial culture of the era. Ireland's collaboration with the Economic Co-operation Administration (Marshall Plan) throughout the 1950s in the implementation of U.S. loans and grants influenced the development of output-driven policies based on principles of productivity.⁴¹⁰ This culture filtered through the chains of command in Bord na Móna works. Bog managers were tasked with maintaining flows of information between workers and executive officers, planning works, and supervision of labour.⁴¹¹ The schematic shown in figure 2.6 was one of many produced throughout the 1950s and 1960s. It demonstrated an attempt to visually represent the ever-increasing rigidity of the management structures of the Board. Human workers became increasingly quantified as "labour per ton solids per annum produced."⁴¹² The relationship between labour and nature was thus transformed into an equation of productivity.

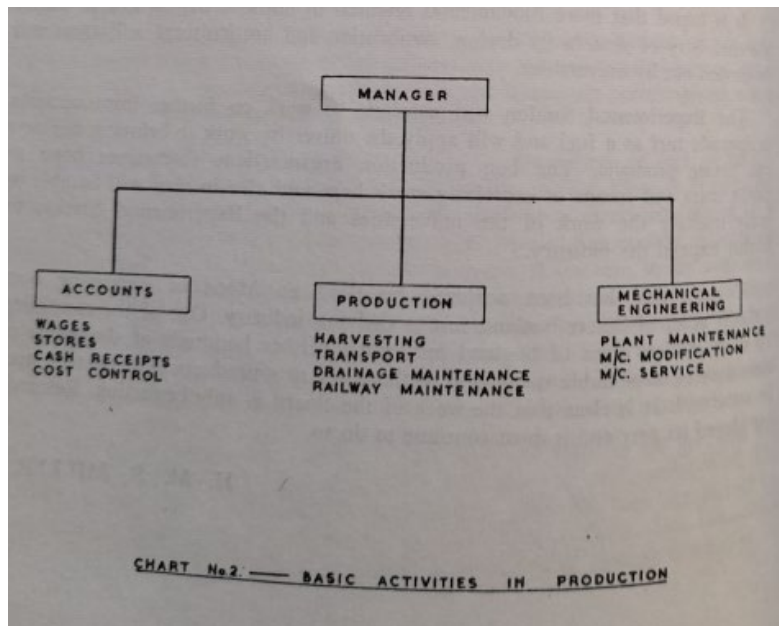


Figure 2.6 Bord na Móna management structure, in *Administration* (1959), 56.

⁴¹⁰ Peter Murray, 'Ireland and the Productivity Drive of Post-War Europe,' in Brian Girvin and Gary Murphy, eds., *The Lemass Era: Politics and Society in the Ireland of Seán Lemass* (Dublin, Ireland: University College Dublin Press, 2005): 66 – 81.

⁴¹¹ John J. Kelly, "Bog Management - Sod and Milled Peat Bogs," *Administration* 7, no. 1 (1959): 56–61.

⁴¹² Michael Maguire, "Consideration for the Adoption of Milled Peat System for Boora Group of Bogs." (Newbridge: Bord na Móna, 1949), 3. UCDA P91/42.

Within this framework, mechanisation of as many aspects of the process as possible was deemed imperative. The material conditions of the emerging industrial workscape influenced not only ways of managing labour but also the mechanisms through which workers could organise.⁴¹³ This was outlined succinctly by the secretary for industrial relations for the Board, A. D. Sheahan in an article published in *Administration* in 1959. He wrote,

“this set-up is not conducive to a fusion of interests among the workers and it is aggravated by the impossibility of contact with one another, except in small groups, during working hours, owing to the vast area over which they are dispersed. Under such circumstances the opportunities for extensive social contact normally available to workers in industry are non-existent and both the Board and the trade unions are confronted with an organizational problem – the Board from the viewpoint of economic production and the unions from the viewpoint of membership.”⁴¹⁴

Unions found some success despite this organisational constraint, however, with workers being represented at various times through the structures of The United Federation of Rural Workers, The Workers’ Union of Ireland, and The Irish Transport and General Workers’ Union.⁴¹⁵ This broad range of representation speaks to the intangible nature of the labour of peatlands. On the one hand, these were rapidly industrialising workplaces, while simultaneously being associated with agricultural labour. Union organisation on industrial peatlands was remembered broadly positively with Val Martin, an engineer at Boora in County Offaly, even going so far as to say,

⁴¹³ “Bord na Móna is, by Irish standards, a relatively large concern employing around 4,000 permanent and 3,000 seasonal workers. It has 130 different categories of employee whose earnings are calculated by reference to 150 different wages rates. Its activities extend from Donegal to Kerry and, subject to centralised control from the Dublin head office, they are operated from 27 centres of “Works” located in bogs throughout the country.” In A. D. Sheahan, “Labour Relations,” *Administration* 7, no. 1 (1959), 25.

⁴¹⁴ Sheahan, “Labour Relations,” 28–29.

⁴¹⁵ Bord na Móna, *Bogmen Be Proud: Towards a History of Bord Na Móna, Boora* (Boora: Bord na Móna, 1997), 80–81.

“none of us would be anywhere only for the unions, that is fact.”⁴¹⁶ The conditions of management of industrial peatlands were such that workers had to navigate new and ever-evolving mechanisms and structures.

The work of peatlands rapidly transformed as the landscape itself was being transformed. Drainage remained a fundamental component of the process of peat extraction. It entirely occupied the early years of the First Programme as each new site had to be drained before production could begin.⁴¹⁷ In the 1950s, a machine for digging drains, known as a *disc ditcher*, was being used with increasing frequency in the development of new bogs.⁴¹⁸ A driver would operate the ditcher on the surface of the bog with a disc attachment that cut into the drains as it was driving. It still required some initial drain digging by hand but drastically reduced the necessity for human labour. What had previously been work for hundreds of men, could be done by the ditcher with just a driver and an assistant in the cab with them. Val Martin recalled watching the ditcher machines cutting drains in Boora six days a week, twenty-four hours a day.⁴¹⁹ The men there would work in twelve-hour shifts to keep the production running at all times. According to Mikie Moyles, a worker on the Mayo bog of Oweninny in the 1950s, the machines could cut 150 - 250 yards of drain in an hour.⁴²⁰

The machinery could be susceptible to sinkage, particularly as it was intended to operate on very wet bog. Mark Nugent, a worker in Derrygreenagh bog in County Offaly, speaking about disc ditchers, claimed that “no matter how good the machines were, they just wouldn’t be able to stay up on it [the bog] so parts of the bog you had to dig by hand.”⁴²¹ This failsafe of human labour and expertise continued to be a part of the operation of the ditcher. Mikie Moyles suggested that an

⁴¹⁶ Val Martin. ‘Bord na Móna Collection.’ *Irish Life and Lore*. 2009.

⁴¹⁷ Clarke. *Brown Gold*, 73.

⁴¹⁸ Clarke, 386.

⁴¹⁹ Val Martin. ‘Bord na Móna Collection.’ *Irish Life and Lore*. 2009.

⁴²⁰ Mikie Moyles. ‘Bord na Móna Collection.’ *Irish Life and Lore*. 2009.

⁴²¹ Mark Nugent. ‘Bord na Móna Collection.’ *Irish Life and Lore*. 2009.

understanding of the local landscape and conditions were also still essential to drainage work even when the ditchers had been introduced. He said that “the most place a ditcher driver skill was required [was] in soft bog, you had to know the bog. There was always a place that they couldn’t cut through and that was to know when to stop.”⁴²² He recalled a visible reduction in the water content of the bogs within a year or two following the drain digging. The machines enabled a faster pace of drainage and therefore increased the rates at which the hydrology and composition of the peatlands was being transformed.

Continuous improvements in the design and performance of machinery were a key objective of the Board during the 1950s and 1960s. These design modifications often had the dual outcome of improving conditions for workers on the one hand while, on the other, eliminating the necessity for human labour altogether. This was clear in the design of the disc ditcher as shown in a 1963 paper written by Bill Green, chief mechanical engineer for the Board. Speaking of the improvements to the ditcher, he wrote,

“new ditchers have been fitted with hydraulic power steering of the large front wheels, with some reduction in capital cost. This steering system is also much easier for the driver to operate. A hand winch to control the working level of the disc ditcher has been replaced by a hydraulic ram. These improvements have permitted the removal of a groundsman and these quite large machines now operate with one driver only.”⁴²³

The engineering and building of new machinery for use on the bogs became a fundamental part of the Board’s operations with workers increasingly moved to apprenticeships in the mechanical workshops. While innovation in design and construction of new machinery facilitated the technological transformation of the processes of peat extraction, this system was supported by

⁴²² Mikie Moyles. ‘Bord na Móna Collection.’ *Irish Life and Lore*. 2009.

⁴²³ W. A. R. Green, “Mechanical Design Features of Bog Development and Production Machinery,” in *Production, Transportation and Utilization*, vol. 1 (Second International Peat Congress, Leningrad, 1963), 311.

what historian David Edgerton and others have described as *maintenance*. Edgerton argues that “maintenance and repair are the most widespread forms of technical expertise.”⁴²⁴ In peatlands, this technical expertise had to incorporate knowledge of the machines with knowledge of the working environments. Workers became machine operators as well as repairmen, centralising the expertise within the company, and reducing dependency on imported machinery or expertise.

The major intervention into industrial peat extraction in the post-war era was the widespread adoption of the milled peat system. Milled peat were fine grains of peat particles which were extracted from the bog in thin layers by a milled-peat miller machine. This material was then turned approximately twice per day by a harrowing machine. Following this, the dried material was piled into rows using a ridging machine. Finally, a harvesting machine was used to collect the peat. This operation was fully mechanised and could take place over the course of three to four days. The operation of a milled peat bog is shown in figure 2.7.⁴²⁵

The earliest attempts to extract peat in this way were conducted by Pierce Purcell in the early twentieth century in Lullymore. He utilised research he had obtained in Dumfries in Scotland on the PECO system of extraction.⁴²⁶ Further evidence of the practicability of the milled peat system of extraction was obtained by Andrews and the peat delegation in Germany and the Soviet Union in 1935.⁴²⁷ In a fully functional system of milled peat production, they saw that it could be more cost-effective with labour and time savings. As well as this, the calorific value per ton was

⁴²⁴ David Edgerton, *The Shock of the Old: Technology and Global History since 1900* (New York: Oxford University press, 2007), 80.

⁴²⁵ Bord na Móna, “Report of Bord na Móna and Accounts.” (1955), 18.

⁴²⁶ “Reports on peat production at Dumfries, Scotland,” report dated September 31, 1933 – January 3, 1934. NAI PRIV/1364/3/7/3; and Clarke. *Brown Gold*, 20.

⁴²⁷ “Where the climatic conditions are favourable, the milled peat (Frästorf) method has been proved to be the most rapid and economical method of producing peat fuel. Other necessary conditions for this system are the freedom to a large extent from roots or timber and the existence of perfect drainage conditions on the bog.” in C. S. Andrews et al., “Report of Peat Delegation to Germany and Russia,” (1935), 8–9.

higher than that of sod peat. In order for the system to be economical, however, the transport and end-use of the product was a significant consideration. For this reason, the system was designed to supply peat power stations and briquette manufacturing plants.

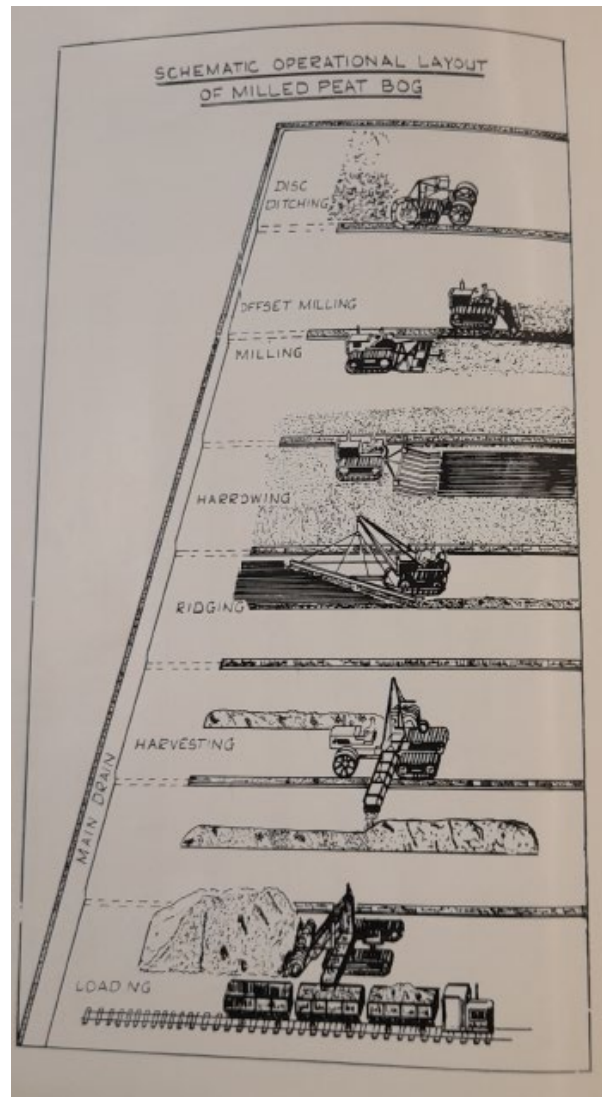


Figure 2.7 Schematic showing milled peat system, in "Report of Bord na Móna and Accounts." (1955), 18.

A report produced by the chief engineer of the Board, Michael Maguire, in 1949 titled "Considerations for the Adoption of Milled Peat System for Boora Group of Bogs," highlighted the challenges and considerations for BNM in introducing milled peat into their extraction

operations.⁴²⁸ In this report, the value of the system was shown by emphasising the fact that all stages of the process could be mechanised, which had not been the case in sod peat extraction. Furthermore, the milled peat machinery which had been seen in Germany and Russia and identified as being suitable for the Irish conditions, was significantly lighter than the machinery in use up to that point. Maguire hoped that this would reduce the instances of sinkage. The report went on to claim that labour requirements would be relatively low due to the mechanisation. Overall, the materiality of milled peat was deemed to be such that it could be extracted, harvested, and transported more economically than sod peat.

This system had considerable risks, not least of which was its weather dependency. While the process of extraction and drying were both very rapid, the entire yield could be saved in 2 – 3 days, any rainfall would destroy the product. This meant that good weather conditions had to be in place for the entirety of the extraction window. As well as this limitation, the machinery used had to be run on diesel and petrol. In the report Maguire was concerned about this increased dependency on imported fuel products.⁴²⁹

Despite these apprehensions, the recommendations of Maguire's report were accepted by the Board. Milled peat was subsequently first incorporated into the Boora works in 1952.⁴³⁰ In order to mobilise the milled peat system, the Board introduced new machinery, new working bog layouts, new skills for workers, and new methods of weather and climate prediction. Figure 2.8 gives a glimpse into the layout of the milled peat fields.⁴³¹ The data analysis component meant that recordings were taken of daily average temperature, barometric readings, and rainfall.

⁴²⁸ Michael Maguire, "Consideration for the Adoption of Milled Peat System for Boora Group of Bogs." (Newbridge: Bord na Móna, 1949), UCDA P91/42.

⁴²⁹ Maguire, "Consideration for the Adoption of Milled Peat System," 9–10.

⁴³⁰ The decision to build a power station run entirely on milled peat in Ferbane was part of the motivation for the transition from sod to milled peat production. See Bord na Móna, *Bogmen Be Proud*.

⁴³¹ Bord na Móna, "Annual Report." 20 (1965), cover.

Quantification of these climatic phenomena were incorporated to provide greater accuracy in determining ideal ‘harvest’ periods.⁴³² So, while increased technological and analytical measures were being introduced to the work of the bog, elements of the non-human environment continued to shape the overall workscape. As well as this, the term ‘harvest’ persisted as the primary means by which to describe extraction. This continuity from the earlier system of extraction embedded the association with agrarian systems, obscuring the industrial realities of the work.



Figure 2.8 Aerial photograph of milled peat production in Derrygreenagh, Bord na Móna, in “Annual Report.” 20 (1965), cover.

The milled peat system produced an entirely new relationship between labour and nature on the bogs. The conditions under which milled peat had to be extracted yielded new hazards to workers in the form of increased fire risk, exposure to dust, and accidents. That milled peat was more prone to spontaneous combustion than sod peat was identified by a delegation to the USSR in

⁴³² J. Martin, “Milled Peat Production in Ireland,” in *Production - Milled Peat*, vol. 3 (International Peat Symposium, Dublin, 1954): 1–28.

1956. In their report they identified how research and experimentation were being conducted on Soviet bogs to decrease this risk.⁴³³ Historian Katja Bruisch details the ever-present risk of fire in Russian peatlands, illuminating consequences like the loss of peat stocks and disruptions to workflows.⁴³⁴

In the Boora report, fire precautions and risk of spontaneous combustion were thus given significant consideration.⁴³⁵ For the workers, this was a chronic concern. What Larry Concannon, a manager of the Bangor Erris bog in 1961, called “the fear of fire.”⁴³⁶ On the milled peat bogs in Mayo, high winds would agitate the peat dust, lifting it into the air. Concannon continued, “when peat is flying, in actual fact when the high winds would come, you wouldn’t see any further than 15 – 20 feet ahead of you with peat flying – a lot of that peat would land on the manifolds, the hot manifolds of the machines and that would ignite and you’d have a fire.”⁴³⁷ Interaction with machinery was one cause for fire, but the heat generated within the stockpiles of milled peat was also a cause of combustion. As such, fire safety precautions were embedded into the operations of the industrial peatlands.

The overwhelming impression gained from the oral histories with relation to milled peat was the way the dust impacted workers’ experiences. Mikie Moyles described the visceral, tactile experience of the imposition of this dust,

“you were moving pure dried milled peat which was dust and you can imagine what trying to move that, take it from there and put it over here, and the dust that that created. It all

⁴³³ CS Andrews, P Cogan, and L Rhatigan, “Report of Delegation from Bord na Móna Which Visited the U.S.S.R.” (Bord na Móna, 1956), 17. UCDA P91/33.

⁴³⁴ Katja Bruisch, *Burning Swamps: Peat and the Forgotten Margins of Russia’s Fossil Economy*, forthcoming 2025, 220–222.

⁴³⁵ Maguire, “Consideration for the Adoption of Milled Peat System,” 27–28.

⁴³⁶ Larry Concannon. ‘Bord na Móna Collection.’ *Irish Life and Lore*. 2009.

⁴³⁷ Concannon.

became a fog in front of the lights and you were driving on the edge of a big drain. It was a stressful kind of job but you got used to it.”

The introduction of machinery had repositioned workers’ bodies from within the drains and turf banks to some distance above the bog in the cab of the machine. This position was no less precarious, however, with the dust from the peat making its way in front of their eyes and in their line of sight, as they tried to navigate this obscured landscape with the ever-present hazard of drains alongside them. The discomfort of this work was also expressed by Fergus Barron, a worker in Derrygreenagh who acknowledged that although some workers would wear a mask, the “goddamn cloud of dust” would cover everything it reached, the interior of the cab as well as the driver.⁴³⁸

The combination of this dust with shift work that would go on through the night generated a completely new sensory relationship between workers and peatlands. Despite this, there is evidence in the testimonies of workers that speak to the ways that this work was still preferable and an improvement on the experiences of hand-won peat. For many, the transition generated better working conditions.

For the management structures of Bord na Móna, addressing the issues of workers’ safety generated new mechanisms within the organisation. These included health and safety training and the promotion of officers to oversee the safety protocols. Commenting on the challenge of this oversight, W.J. Moloney wrote, “here then are some of the roots of the Board’s accident problem – large numbers of men spread thinly over vast acreage of bog, all-weather outdoor heavy labouring work, underfoot conditions which even in summer are unstable and in winter are treacherous to a high degree.”⁴³⁹

⁴³⁸ Fergus Barron. ‘Bord na Móna Collection.’ *Irish Life and Lore*. 2009.

⁴³⁹ W. J. Moloney, “The Accident Problem,” *Administration* 7, no. 1 (1959): 32–40.

Besides the workers having to navigate new relationships with their environments, the landscape itself was transformed through the introduction of the new machinery, infrastructure and settlement structures. By 1963, the machinery in operation on the bogs included surface-levelling machines, sod-peat baggers, windrowing machine for footing sods, sod-peat turning machines, sod-collectors, sod-peat loading machines, milled-peat millers, spoon harrows, milled-peat ridgers, milled-peat harvesters, milled-peat loaders, and disc ditchers. Every aspect of the labour of extraction had in some way been mechanised. And this machinery was almost exclusively run on diesel, entangling the workscape within systems of greater fossil fuel dependency.

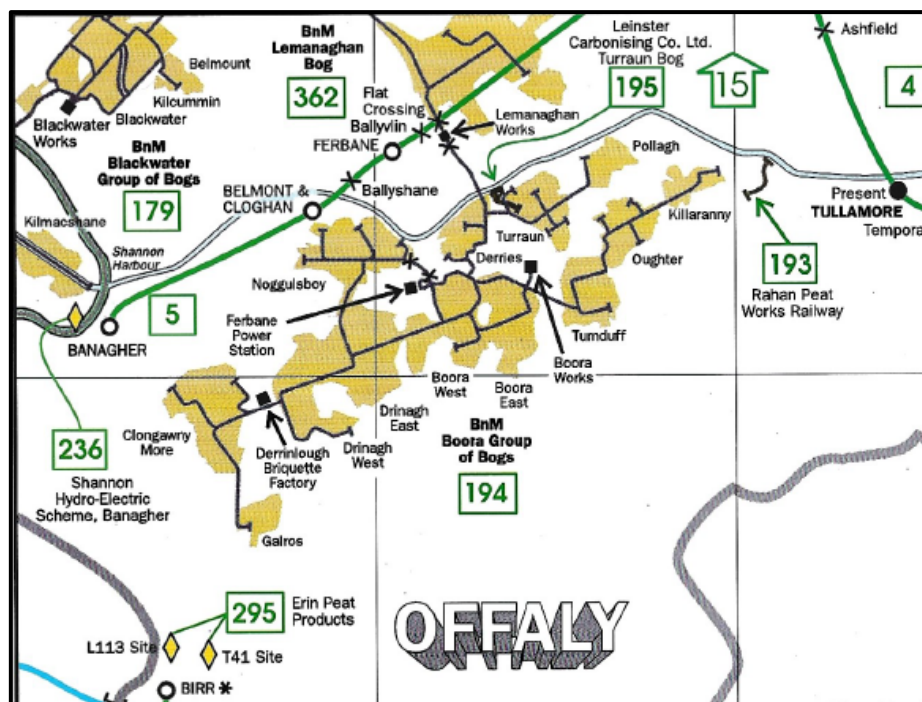


Figure 2.9 Map of Boora works showing rail network, in Johnson's Atlas and Gazetteer of the Railways of Ireland (1997), 21.

As well as the machinery, the rail network was expanded in line with the expansion of the geographical scope of extraction. The imprint of this can be seen in figure 2.9, which shows the prominence of the rail network in the industrial landscape. This map is an excerpt from a national

atlas of railway networks produced by railway historian, Stephen Johnson.⁴⁴⁰ The polygons shaded in brown represent peatlands, with the light rail network represented by the black lines intersecting them. At the centre of this rail network, the map shows Ferbane power station, where the milled peat was delivered to be burned and converted to electric power. Ancillary works were also installed alongside the major peat works. In Boora, for example, 24,000 concrete pipes were being manufactured each year in a factory on site at the Boora works.⁴⁴¹ The map also indicates the Derrinlough briquette factory and a number of other supplementary works. The material impact of this infrastructure is clear in figure 2.10 which shows the workshops and storage facilities on the site of the Boora works.⁴⁴²

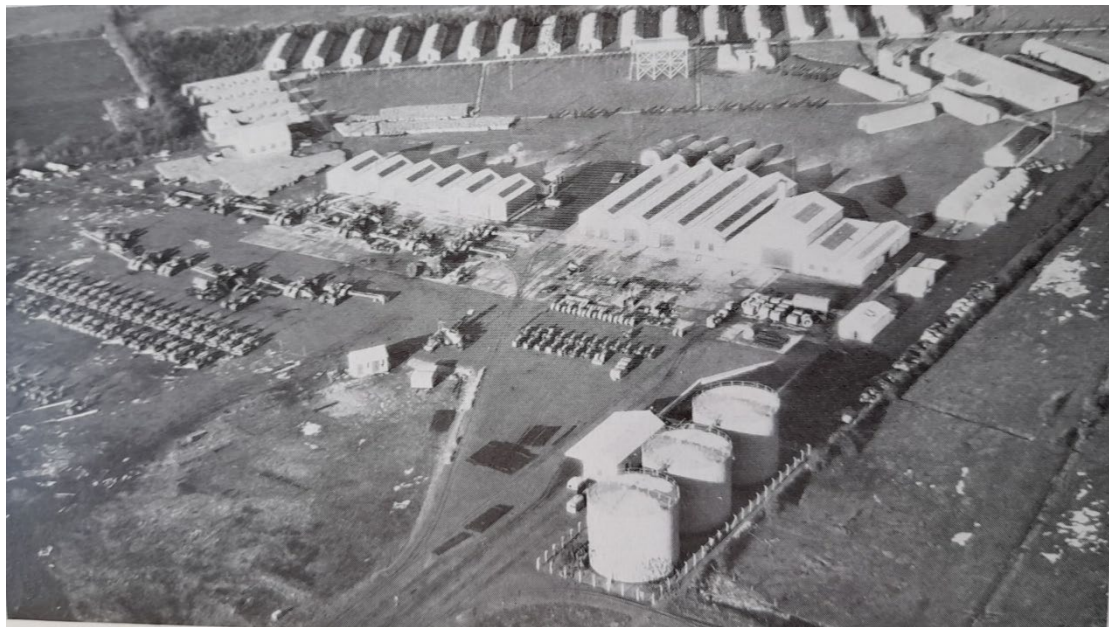


Figure 2.10 Boora Works, in *Administration* (1959), 19.

⁴⁴⁰ Stephen Johnson, *Johnson's Atlas and Gazetteer of the Railways of Ireland* (Leicester: Midland Publishing Limited, 1997), 21.

⁴⁴¹ Bogmen Be Proud: Towards a History of Bord Na Móna, Boora (Boora: Bord na Móna, 1997), 32.

⁴⁴² Paddy Cogan, "Milled Peat for Electricity Generation – A New Development," *Administration* Vol. 7, no. 1 (1959), 19.

In 1952, the first housing schemes were established in Kildare and Offaly, adjacent to the Timahoe and Clonsast schemes. According to Marian Curry, these areas prior to the peat development were rural, remote, and had poor services and infrastructure.⁴⁴³ The Coill Dubh housing scheme, which was in service to the Timahoe bog works, included the building of 156 houses and improved services and revitalization of the area through the building of primary and secondary roads, a school, recreational facilities, grocery stores, a petrol station, a chemist, a post office, and the introduction of bus services for the community.⁴⁴⁴ The housing designs ranged from two-storey terraces to three-storey blocks of apartments over ground floor shops, and the quality of the amenities was of a much higher standard than typical Irish dwellings at the time, with indoor toilets, hot and cold water, and high quality peat-burning stoves.⁴⁴⁵

The impacts of these interventions were not just visible in the local landscapes, but also in communities. Where there had previously been open countryside, worked largely by famers and turbary peat cutters, there were now large housing development, roads, shops, community centres. The footprint of this development, as described by Mark Nugent, “changed the whole face of the midlands.”⁴⁴⁶ Kathleen Doherty, a woman who had grown up in Timahoe before the development of Coill Dubh, said that “the school was built, the church was built, everything then fell into place, a new life.”⁴⁴⁷ There were initial challenges that arose from what Curry describes as the “suspicion and snobbery of the local community.”⁴⁴⁸ This along with the migrant communities changing local power structures meant that it took time for the ‘outsiders’ to become ‘insiders.’ Kathleen Doherty,

⁴⁴³ Curry. “The Socio-Economic Impact of Bord na Móna on the East Midlands,” 19-20.

⁴⁴⁴ Curry. “The Socio-Economic Impact of Bord na Móna on the East Midlands,” 23-24.

⁴⁴⁵ Fergal MacCabe, *Ambition and Achievement: The Civic Visions of Frank Gibney* (Co. Dublin: Castles in the Air Publications, 2018), 24.

⁴⁴⁶ Mark Nugent. ‘Bord na Móna Collection.’ *Irish Life and Lore*. 2009.

⁴⁴⁷ Kathleen Doherty. ‘Bord na Móna Collection.’ *Irish Life and Lore*. 2009.

⁴⁴⁸ Curry. “The Socio-Economic Impact of Bord na Móna on the East Midlands,” 24-25.

describing the responses of the local communities, recalled that “all those strange fellas [Bord na Móna workers], they used to call them the ‘westerners,’ they got used to the ‘westerners.’”⁴⁴⁹

The housing schemes led to significant population growth in midland communities due to migration, and birth rates rising from the children of couples often made up of workers and locals.⁴⁵⁰ Historian Petra Dolata discusses the significance of women and mothers of workers in the coal-mining Ruhr Area in Germany in the post-war era.⁴⁵¹ While her work is primarily concerned with the complex positionality of these women as simultaneously resistant to the effects of coal pollution as well as supporters of continued extraction, she foregrounds an important consideration in the history of mining communities. Domestic labour that facilitated the labour of extraction was an entirely necessary component of the industrial workscape. The development of BNM villages and communities necessarily produced systems of invisible, un-paid household labour in service to overall extraction.

The changing nature of draining and extracting peatlands yielded dramatic changes to both labour and landscape. The work on a bog became more technical, with knowledge of the working of the machinery becoming more valuable than the workers’ physical productivity. As Val Martin observed, “the machines then began to get into being, so the hand work disappeared then.”⁴⁵² The large-scale interventions into the peatlands also created a need for a year-round workforce, to conduct drainage, maintain existing drainage, and upskill in the mechanics of the machinery. The introduction of lighting on the machinery created a relentless economy of extraction on the bogs where men and machinery worked day and night to extract peat from the ground.

⁴⁴⁹ Kathleen Doherty. ‘Bord na Móna Collection.’ *Irish Life and Lore*. 2009.

⁴⁵⁰ Curry. “The Socio-Economic Impact of Bord na Móna on the East Midlands,” 20.

⁴⁵¹ Petra Dolata, “Complex Agency in the Great Acceleration: Women and Energy in the Ruhr Area after 1945,” in *In a New Light: Histories of Women and Energy*, ed. Abigail Harrison-Moore and Ruth W. Sandwell (Montreal Kingston London Chicago: McGill-Queen’s University Press, 2021): 155–73.

⁴⁵² Val Martin. ‘Bord na Móna Collection.’ *Irish Life and Lore*. 2009.

Workers were aware of the changes they were witness to. The following is a passage from a poem called ‘The Passing of the Sleán,’ written by Joe Harrington, the son of a BNM worker in Lyreacrompane.

“The bogland lies deserted
as I walk the long boreen
the turf lies neatly on the banks
but bogmen can’t be seen
where once a hundred workers toiled
to win the humble sod
a turf machine now trundles down
the place on which they trod
technology has found us – a revolution new
hydraulic power in doing those things we used to do
in the space of just a decade
so much has changed so fast
the sleán has joined the growing list
of things that shaped our past.”⁴⁵³

Besides an awareness of the changing nature of the work, there was also an acute awareness of the ways that the landscape was changing. Val Martin, reflecting on the availability of fresh drinking water in the bogs, said that “in the beginning you could get it [water] in a lake. If you knew where there was a clean lake. But then as machines got plentiful you know you could find diesel in the lake.”⁴⁵⁴ John ‘Davey’ Nolan, from Lyreacrompane, commented that before the BNM schemes, the bogs were “an open plain, you could barely walk it was so wet.”⁴⁵⁵ He remembered seeing birds like grouse and snipe. The workers physically transformed the landscape through their labour, the energy of their bodies and their understanding of their environments, remaking peatlands into sites of extraction. The introduction of fossil-energy powered machinery

⁴⁵³ Joe Harrington. ‘The Passing of the Sleán.’ *The Lyreacrompane District Journal* 1. 1990: 7.

⁴⁵⁴ Val Martin. ‘Bord na Móna Collection.’ *Irish Life and Lore*. 2009.

⁴⁵⁵ John ‘Davey’ Nolan. ‘Bord na Móna Collection.’ *Irish Life and Lore*. 2009.

reduced the need for such quantities of workers but still required an understanding and connection with the landscape. The workers were conscious of the transformations happening, and of the resistance of nature.

This chapter shows that the transition to industrial peat extraction fundamentally altered peoples' relationship with peatlands. For migrant workers, peatlands became spaces of opportunity and mobility where they had previously been sites of necessary work for survival. The nature of the labour changed alongside the interventions into the landscape. The introduction of machinery repositioned the workers from within the trenches of the bogs to overseeing the vast landscapes from machinery cabs. Electric lighting made the bogs workable throughout the night. Maintenance of machinery and drainage channels introduced year-round employment opportunities that extended workers' interactions with peatlands.

The kinds of knowledge that had previously been valuable in the extraction of peat also changed. Understanding the profile of the bogs became less important by virtue of the ability of the bagger to subsume the layers of peat into one standardised product. Milled peat produced new kinds of interactions with non-human agents, with fire and dust shaping the working day. The diversity of language and tools and methods that had developed across communities in rural Ireland was largely obscured by the standardisation of practices and language within the structures of BNM.

The material conditions of the non-human environment continued to exert influence over the systems of work. The milled peat system was even more susceptible to environmental conditions. Despite increased technologies and methodologies of climate analysis, *bad harvests* appear frequently in BNM reports and accounts, described as being the result of poor weather. Furthermore, the persistence of flows of water through peatlands placed workers in a relentless system of drain maintenance to manage the hydrology of the bogs.

Workers in the industrial scheme were materially engaged in the large-scale extraction of peat across the island of Ireland. Many of them came to these jobs as an alternative to emigration

and poverty. They came to the bogs with a familiarity and understanding of the practices and particularities of cutting turf which they had inherited through generations of turf cutting in rural communities in Ireland. In industrial peatlands, there remained some vestiges of co-operative work, although these were largely diminished due to the reduced need for large numbers of workers in the operations of machinery. Their lives in the midlands were marked by the changing nature of the work, the increased mechanisation and subsequent intensification of extraction.

Chapter Three

“From dark brown sod to light blue bolt”

Peat and Ireland’s Electrification

I. Introduction

“The sod of turf had been dreamed, planned, matured, and translated in practice to light and power.”⁴⁵⁶

Speaking in 1950 on a radio broadcast announcing the opening of the power station at Portarlinton, County Laois, journalist P.P. O’Reilly captured the sense of achievement, progress, and ambition that was realised with the development of the first peat-powered electricity generating station on the island of Ireland. The development of Portarlinton Power Station was the realisation of political and technological ambitions which became practicable in the years following the Second World War. The expansion of the extraction of peat on a large scale had created a stable peat fuel supply. The ability to change the materiality of peat from solid fuel to electric energy thus became a tool for development.

O’Reilly’s statement points to three important considerations in the history of peat for electricity production. He indicated the temporality of the development, which had involved

⁴⁵⁶ “ESB Turf Plant in Portarlinton,” *P. P. O’Reilly Talk* (Radio Éireann, April 17, 1950). RTÉ archives, <https://www.rte.ie/archives/collections/acetate-disc-collection/11399203-new-esb-station-at-portarlinton/>.

discourse and experimentation over time. Electricity generation was a way to overcome the energetic and geographical limitations of peat fuel. The infrastructure of power generation was a symbol of this historical achievement. He also foregrounded the *sod* of turf and its conversion to electricity. The materiality of peat was central to debates about power development. Peat was chosen alongside, or instead of, other fuel sources and required the application of specific technologies. Finally, speaking as he was from Portarlinton, at the heart of Bord na Móna's industrial peatlands, the spatial parameters of power generation and distribution were invoked. Where the peat was located, as well as whom the electricity would serve were significant considerations in shaping the development of electricity networks.

This chapter demonstrates how the lens of electricity production and distribution can enhance understandings of regional development in Ireland. The constraints and material limitations imposed by the geographical specificity of peatlands contributed to unequal outcomes of rural development across different regions. These outcomes were reinforced by the inherited historical biases and values which were imbued into the infrastructure of electricity. This chapter argues that the development of infrastructure replicated historical patterns of unequal development and regional biases. This happened through policy making as well as the production of visual representations of Ireland's energy network. Map-making provided a visual means through which to represent the spatial parameters of the power network.

The use of peat to produce electricity had been a desire of various industrialists and administrations in Ireland. Portarlinton, and the ten other peat stations which followed, were part of the realisation of a vision of development for the Irish state. This development included the rollout of the ESB's Rural Electrification Scheme and the expansion of industrial policies. Historian of technology Thomas Hughes considers the development of electric power within understandings of control and access. In this reading, it is possible to understand the Irish case as one in which political interests surrounding national and regional development shaped institutional

practice.⁴⁵⁷ For example, the Electricity Supply Board were ultimately beholden to the directives to develop power stations which would be fuelled by peat, despite hesitation on the part of engineers regarding the perceived inferiority of peat for this purpose compared to coal, oil, and gas.

Furthermore, Hughes, and later Christopher Jones, highlight the ways in which urban and rural spaces can be understood and serviced differently in the production and dissemination of electric power.⁴⁵⁸ Central to this chapter, then, is a consideration of the political constructions of the categories *rural*, *urban*, *industrial*, and *modern* in the context of electricity generation. According to literary critic and historian Raymond Williams, these categories are constantly in flux, both materially and socially.⁴⁵⁹ As such, in the examination of a wide range of sources, this chapter pays specific attention to the positionality and potential biases that underpinned development strategies.

The structure of this chapter follows O'Reilly's observation. It begins by exploring how peat was 'dreamed' into becoming electricity. This includes an analysis of imperial peat-power imaginaries and the contributions of various capitalist industrialists and the state towards the creation of a vision of industrial peatlands. It then examines how this vision was 'planned and matured' through an analysis of post-independence power debates and the codification of the peat-for-power objectives of the government. Part of this discussion will consider the ideological and legislative underpinnings of rural development for government actors. Finally, in order to show how peat was 'translated in practice to light and power,' two case studies are developed. These are the midlands stations and the western stations. These cases demonstrate that the introduction of electricity infrastructure had different meanings and different outcomes for different regions. The generation of electricity from peat could on the one hand represent the modern, international

⁴⁵⁷ Hughes, *Networks of Power*.

⁴⁵⁸ Jones, *Routes of Power*.

⁴⁵⁹ Raymond Williams, *The Country and the City* (Nottingham: Spokesman Books, 2011).

prestige of Irish engineering in the midlands, while at the same time reinforce the rural Irish imaginary associated with the west of Ireland.

II. Dreamed – Imperial peat-power discourse

Ireland's power production was part of a wider European and Western history of electricity development. The production of electric energy from fossil fuels captured the imaginations of industrialists throughout the eighteenth and nineteenth centuries, in tandem with technological developments in steam power. Yet, this was also an informal, disparate, and decentralised process. Part of the appeal of electricity was its efficiency as a system of energy transmission by comparison to steam power which required networks of rail infrastructure to transmit solid fuel. Historian Alfred Crosby argues that the realisation of projects like the illumination of the Eiffel Tower in 1889 or the Chicago World's Fair in 1883 can be viewed as evidence of a new vision that had emerged in Western culture by the end of the nineteenth century wherein electricity was a new force of progress and a symbol of civilisation.⁴⁶⁰

The generation and transmission of electricity was an organisational challenge which reflected economic and geographical constraints and preferences. Furthermore, the technologies and infrastructure associated with this development became imbued with ideas of civilisation and progress. In Ireland, the earliest examples of electricity production and distribution were in urban areas along the east coast. Governed by the British parliament's 1882 Electric Lighting Act, private companies and local authorities generated and transmitted electric power in cities like Dublin and Belfast.⁴⁶¹ The major technological innovation at this time was the Pigeon House coal power

⁴⁶⁰ Crosby, *Children of the Sun*, 110–113.

⁴⁶¹ For a comprehensive overview of the developments in electricity production and transmission in Ireland before independence see Manning and McDowell, *Electricity Supply in Ireland*, 1–13.

station. This was built by the Dublin Corporation and was operational in 1903. Electricity from this plant was used for lighting Corporation dwellings as well as powering Dublin transit systems. The priorities of all electricity projects during this period were the provision of electricity to urban or industrial consumers.⁴⁶²

These kinds of logics were visible in the early stages of many international electrification schemes. Christopher Jones, in *Routes of Power*, identifies the tensions between technocratic and capitalist objectives in the development of the United States' power grid.⁴⁶³ Similarly Thomas Hughes, in *Networks of Power*, demonstrates the interplay of technological innovation with government policy and market capitalism in the case of Berlin.⁴⁶⁴ These cases speak to the challenges inherent in the establishment of electric power systems wherein governments and private enterprises collaborated in different aspects of the development process. What both Jones and Hughes also illuminate in their works were the ways in which the development of electrical infrastructures inherited the preferences of the actors involved, that is, priority was often given to urban or industrial centres. Ireland's positionality as an agricultural colony of the British Empire meant that investment in the infrastructure of electrification was largely driven by independent industrialists over the state.

The potential of peat for the generation of electric power began to emerge in the imperial discourse that was outlined in Chapter One. This peatland resource imaginary was shaped by knowledge production related to drainage, extraction, and the productive potential of Ireland's purported wastelands. Imperial and industrial elites engaged in processes of value-making that were shaped by technological and spatial considerations of extraction. These processes extended to the application of peat fuel in systems of power generation. The writings of industrial developers and engineers provide insights into the beliefs and values underpinning discourses about power

⁴⁶² Manning and McDowell, 1.

⁴⁶³ Jones, *Routes of Power*, 195–226.

⁴⁶⁴ Hughes, *Networks of Power*, 175–200.

production. As Chapter One identified, there was a significant body of research produced in the late nineteenth and early twentieth centuries by engineers and academics about the industrial development of peatlands. Certain actors within this discourse focused heavily on the use of peat for electricity generation.

For example, in *Peat and its Products*, William Kerr devoted significant time to developing a case for the mechanisation of peat extraction, and various other industrial uses including peat gas and peat coke. But in his case for “electricity from peat,” he spoke to the economic imperatives of electrification.⁴⁶⁵ Kerr wrote “it is recognised that electricity is destined to supersede steam as a cheaper form of motive power, and is rapidly becoming an important factor in competition with steam power.”⁴⁶⁶ Kerr imagined a vision of Ireland powered by electricity wherein Irish industries like wool, pottery, and linen could be expanded and made profitable. “There is,” he claimed, “with fuel and power, a great future for this manufacture.”⁴⁶⁷ Peat was a critical resource in Kerr’s vision of Irish economic growth.

Peat fuel could not easily or immediately be utilised in steam boilers. Its high water-content and low calorific value relative to coal posed chemical and technological challenges. Electrical engineer Thomas Tomlinson attempted to address these challenges. He presented multiple research papers to the Irish branch of the British Institution of Electrical Engineers and the Institution of Civil Engineers of Ireland promoting the use of peat as a fuel source for electricity generation.⁴⁶⁸ In a 1907 paper titled “The Production of Power from Peat,” Tomlinson described advances being

⁴⁶⁵ Kerr, *Peat and Its Products*, 106-118.

⁴⁶⁶ Kerr, 106.

⁴⁶⁷ Kerr, 112.

⁴⁶⁸ According to Thomas Hughes, the Institution of Electrical Engineers was an influential organisation that was deeply embedded in discourses about the advances and technologies of electricity generation and distribution. See Hughes, *Networks of Power*, 233.

made in Italian gas-works where dry peat was combusted and converted to gas for motive power.⁴⁶⁹ This process worked using Italian peat that contained 40 per cent moisture. And, while this demonstrated the application of peat within a system of power production, Tomlinson noted the obvious climatic differences between Ireland and Italy. The saturation of Irish peatlands, plus the wet climate inspired him to devise a system wherein the waste heat produced by converting peat to gas could be used to artificially dry further loads of peat.

Tomlinson's work drew on the experiences of international peat producers as a means to validate his proposals. In a 1913 paper, he described the successful operation of a large peat power station in Osnabrück in Germany, and another in Gretna in Scotland.⁴⁷⁰ The success of these operations was for Tomlinson not simply the efficiencies of their production and distribution but also in the production of by-products like gas, ammonia, and nitrates.⁴⁷¹ By focussing on the technological possibilities, Tomlinson was able to demonstrate new ways to dry peat in order that it could be more efficiently burned in the production of gas or electric power. His research was met with varying degrees of scepticism and optimism by his peers. One commentator in 1908 remarked that "the apparently impossible was now not infrequently surmounted by modern science."⁴⁷² Technological advancements, like the processing of hydrous peat, were crucial in proving the viability of peat for power. In Tomlinson's research, and Kerr's before him, the question of a steady and consistent supply of peat fuel was central. They both argued that mechanising the extraction of peat would enable greater efficiencies in an overall system of power production.

⁴⁶⁹ Thomas Tomlinson, "The Production of Power from Peat," *Journal of Proceedings of the Institution of Electrical Engineers* 40, no. 187 (1908): 106–111.

⁴⁷⁰ Thomas Tomlinson, *A Proposed Experiment in Cheap Peat-Fuel-Winning for Power Purposes* (Dublin, for the author: John Falconer, 1913): 47–81.

⁴⁷¹ Tomlinson, 50–51.

⁴⁷² Thomas Tomlinson, *The Cost of Getting and Drying Peat with Special Reference to Its Use in Power Production* (Dublin, for the author: John Falconer, 1909), 70.

As well as questions of technological possibility, economic viability was a concern for peat industrialists. Kerr, in the context of strikes at British coal mines, argued that for power generation, “expenses are largely dependent on the cost of fuel; and the price of coal, at the pitmouth, doubled between the years 1888 and 1900. Providence has placed this valuable substance Peat freely at the command of man.”⁴⁷³ The dependency on the fluctuations of coal prices and supply inspired Kerr to frame peat as a more reliable and therefore economical resource. The idea that peat was *free* in comparison to coal was an enticing one. Kerr argued that any concerns over costs could be alleviated through the production of cheap electricity from peat.

While Tomlinson was primarily concerned with convincing his contemporaries of the practicalities of electricity generation from peat, he also addressed the question of the Irish market. In 1909, he wrote, “a power scheme in Ireland to be good must be very good. It is not here, as it is in Britain, a question of supplying relatively cheap power to meet an existing demand, but a question of supplying power so cheaply as to create a market.”⁴⁷⁴ This approach was not unique to Tomlinson. In the emergent electricity industry in the United States, historian Christopher Jones describes a similar logic of creating demand as energy boosterism.⁴⁷⁵ Investment in energy projects required proof of economic viability within the frameworks of growth and industrial capitalism. It wasn’t enough to outline the technical potential of a peat scheme without addressing the contemporary limitations of Ireland’s economy.

The discourse surrounding the generation of electricity from peat in the early twentieth century was primarily shaped around addressing concerns over technology and economy. But electricity systems also required complex networks of supply transit, transmission, and distribution. These networks necessarily required developers to consider the spatial realities of peatland distribution in Ireland. Ireland’s positionality with relation to British industrial development, as well as the

⁴⁷³ Kerr, *Peat and Its Products*, 115.

⁴⁷⁴ Tomlinson, *The Cost of Getting and Drying Peat*, 50.

⁴⁷⁵ Jones, *Routes of Power*, 9.

geographical locations of peatlands themselves, posed challenges to the architects of the electric peatland imaginary. The ways in which these concerns were addressed revealed the material and spatial biases underlying electrification discourses. Colonial resource-making, urban-rural delineations, and industrial-agrarian dichotomies were all governing principles within the discourse.

This was evident in *Peat and Its Products*. Kerr expressed frustration at the British government's inability to acknowledge the potential of peatlands as a resource in service of the Empire, calling on "the predominant partner" to act "if only in its own self-interests."⁴⁷⁶ While he recognised that there were potential benefits for Irish society and industry, he also suggested that resource prospecting could be enhanced for state profits. In his vision of development, using peat to generate electric power in Ireland would, he speculated, create the necessary infrastructure for the discovery of further resources like "tin, lead, zinc, and other metals."⁴⁷⁷

Kerr's overall vision of the kinds of development that could be provided through electric power was diverse. While addressing Ireland's contribution to Empire, Kerr simultaneously addressed the question of bringing electricity supply to less populated areas. He argued that many regions in Ireland were prohibited from industrial development by virtue of their distance from coalfields or urban centres. In particular, he referred to "the restless tide of emigration ever setting towards the West."⁴⁷⁸ Development and energy discourse at the time was informed by the salience of the Land Acts and the attempts by the Congested Districts Board to alleviate extreme poverty in the rural and largely agrarian west of Ireland.⁴⁷⁹ Kerr highlighted the contemporary inequality in distribution and access to electric power. And, he claimed, urban and industrial centres like Belfast and Dublin were better serviced than the rest of the country by private companies.

⁴⁷⁶ Kerr, *Peat and Its Products*, 111.

⁴⁷⁷ Kerr, 113.

⁴⁷⁸ Kerr, 111.

⁴⁷⁹ Dooley, "Irish Land Questions," 133-137.

The discourse surrounding the utilisation of peat fuel for electricity generation situated Ireland's peatlands within wider geographies of capital and trade. In 1908, Thomas Tomlinson wrote,

"I need not tell you that with one-seventh of its limited area under bogs, very little of Ireland is beyond the reach of economical electrical transmission of cheap power from these bogs; that Ireland is not such an industrial wilderness that there is no demand for cheap power and light in her towns and cities; nor, even if it were so, is Ireland so far from the industrial and distributing centres of Europe that cheap power, cheap carriage (for her bogs are traversed by canals and navigable rivers) should not attract industries to which these are essential."⁴⁸⁰

His rationale challenged the wasteland narrative by suggesting that the extent of peatlands was in fact an economic asset. It meant that there were few places from which access to peat-electricity would be prohibitively expensive. He positioned Ireland within the context of a broader European market, with peat as a means through which to build energetic and consequently economic links. Through the lens of electricity-production, Tomlinson was able to reimagine Irish peatlands as part of an industrial European network.

Both Kerr and Tomlinson reached the same conclusion respectively in their work, that peat power stations should be built on the peatlands themselves, proximate to the supply of fuel. This took into consideration the cost of transporting peat fuel and the location of peatlands. As discussed in Chapter One, The Great Britain Fuel Research Board's 1920 report, *The Winning, Preparation, and Use of Peat in Ireland*, came to the same conclusion.⁴⁸¹ Griffith and his colleagues wrote, "the cost of transport suggests the advantage of utilizing peat, if possible, in the immediate neighbourhood of the bog, and this suggests the establishment of a power station where the fuel could be either used for steam raising or in producer plants."⁴⁸² The economic and material constraints associated with peat extraction and transport thus required engineers to reimagine

⁴⁸⁰ Tomlinson, "The Production of Power from Peat," 110.

⁴⁸¹ FRB et al., *The Winning, Preparation, and Use of Peat in Ireland*.

⁴⁸² FRB et al., 37.

peatlands as sites of electricity production. Their report also spoke to the contemporary limitations of access to electric power. While the report calculated that peat could be used as a direct substitution for coal in the electricity production for Dublin or Belfast for home utility and transit, it also acknowledged the regional disadvantage of the congested districts in the west of Ireland.⁴⁸³

Despite being a highly interventionist discourse, the recommendations and plans for peat power stations were not implemented. Tomlinson's outreach had seemingly little impact on investment in peat at the time. His papers on the subject were primarily self-published and, where he included the feedback of attendees to his research presentations, they largely expressed scepticism, with the question of the cost of peat extraction being largely unresolved.⁴⁸⁴ The kinds of investment he envisaged were a significant risk for any capitalist and it was considered more viable to take this risk in England, and with coal. A paper that he wrote on peat for electricity production, however, is located in the collected papers of Pierce Purcell in the National Archives of Ireland.⁴⁸⁵ Tomlinson's writings, then, contributed to the collection of one of the leading figures in the industrial development of peatlands in the 1930s.

The FRB's report, due to the political unrest in Ireland at the time of its publication, was also not implemented by the British administration. As with the peat resource imaginary outlined in Chapter One, the legacies of pre-independence energy discourses persisted and influenced the governments of the Free State. The questions of technological efficiency and economic viability

⁴⁸³ The report claimed, "it is interesting to note that this figure [estimate of national peat stock] has a close relation to the amount of peat which would be required to displace coal used in Dublin or Belfast for the production of electric power." In FRB et al., 29; and mentions of Congested Districts Board in FRB et al., 15, 18, 20.

⁴⁸⁴ Thomas Tomlinson, "Peat as Gas Engine Fuel, New Developments," in *Institution of Electrical Engineers* (Dublin, 1912): 1 - 27; Thomas Tomlinson, *A Proposed Experiment in Cheap Peat-Fuel-Winning for Power Purposes* (Dublin, for the author: John Falconer, 1913).

⁴⁸⁵ Thomas Tomlinson, "Economic Production of Power for Irish Industries," (n.a.). NAI PRIV1364/2/2 (1).

drove policymakers to consider the possibilities of electric infrastructure. But the spatial complexity of infrastructural development meant that the underlying beliefs and associations about what electric power was for and who it should service remained a persistent source of tension.

III. Planned and Matured – Peat for the expansion of the Irish electricity network

Outlining the state of electricity production and distribution in 1925, Thomas McLaughlin, the architect of the Shannon Scheme, described a limited system of private producers supplying power for profit through primarily steam or oil driven electricity.⁴⁸⁶ He wrote, “such power stations can only supply those living in the towns or villages and their immediate neighbourhood. They can never supply farmers living in the country.”⁴⁸⁷ For the actors involved in the development of the Shannon Scheme, and McLaughlin in particular, a goal of the Scheme was to extend a network of electric power throughout rural Ireland.⁴⁸⁸ The choice of the Shannon River instead of the Liffey was a reflection of this ambition with its spatial reach decentralised from the Dublin hub.⁴⁸⁹ Figure 3.1 shows the proposed transmission network to accompany the Shannon Scheme designed by Siemens-Schuckert in 1925. This map shows that even within the imagined ideal system of electricity distribution, areas along the west coast of Ireland were underserved. Transmission infrastructure was not planned to extend to areas within Donegal, Mayo, Galway, Kerry, and Cork.

The development of the infrastructure of electric power in the Irish Free State was embedded within a political and institutional discourse about technology and economy, as well as the idea of the nation. Chapter One demonstrates that the Cumann na nGaedheal government’s investment in

⁴⁸⁶ McLaughlin, *The Shannon Scheme*, 12.

⁴⁸⁷ McLaughlin, 12.

⁴⁸⁸ Michael J. Shiel, *The Quiet Revolution: The Electrification of Rural Ireland, 1946-1976*, 2003 ed (Dublin: O’Brien Press, 2003), 16.

⁴⁸⁹ Shiel, 16.

the Shannon Scheme (1925 – 1929), and the ESB (1927), established an institutional framework wherein the generation and distribution of electricity were centralised. This further set a precedent for the use of hydropower, as a technological achievement and symbolic national resource of Ireland.

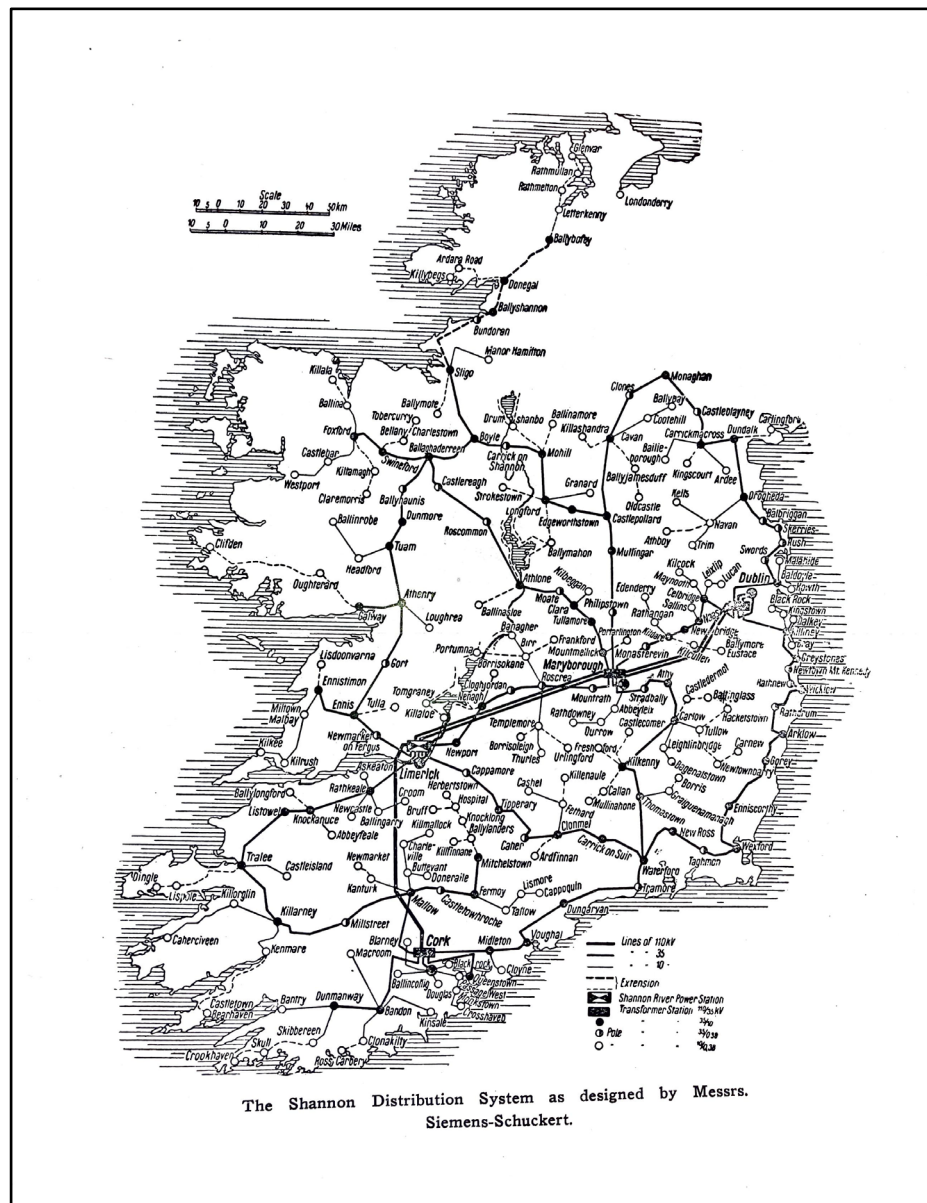


Figure 3.1 “Shannon Distribution System,” Siemens-Schuckert, in McLaughlin, *The Shannon Scheme*, 4.

The transmission network eventually established by the ESB was even more limited than the Siemens-Schuckert proposal. Despite the desire for a nationwide network, the ESB concentrated on supplying power to towns and urban centres. This decision was primarily based on practicality but served to deepen the distinction between levels of development in populated and less populated areas.⁴⁹⁰ While the imagery associated with the Shannon Scheme evoked the modernity and progress of the nation, this development was unequally distributed.⁴⁹¹ Figure 2 shows a simplified map of the ESB's transmission network in 1930, which indicates the districts into which the company had divided the country.⁴⁹² The Eastern Operations Division comprised the districts of Dublin, Waterford, Portlaoighise (Maryboro), and Cavan. The Western Operations Division included Cork, Tralee, Limerick, and Galway. This division into districts was an organizational tool for the ESB who assigned engineers to each district to oversee the development of transmission lines.⁴⁹³ The map reflects the spatial extent of transmission based on the capacity of the network at the time. It also demonstrates how maps were increasingly utilised as a means of simplifying the complex energy network in Ireland.

Increasing demand for power and the inability of the Shannon Scheme to consistently meet peak demand in the 1930s necessitated a reappraisal of the existing infrastructure.⁴⁹⁴ The ESB and the Irish government had to consider other energy sources besides hydropower, including peat.⁴⁹⁵ Competing beliefs about the best source for electricity generation were part of ideological struggles that reflected the post-colonial political landscape as much as the material qualities of the sources themselves. Fianna Fáil were in favour of the use of peat to expand the network of electricity

⁴⁹⁰ Shiel, *The Quiet Revolution*, 25.

⁴⁹¹ Shiel, 22.

⁴⁹² ESB, "Annual Report and Accounts of the Electricity Supply Board." (Dublin: ESB, 1930), Appendix II.

⁴⁹³ ESB, 9.

⁴⁹⁴ Manning and McDowell, *Electricity Supply in Ireland*, 91-94.

⁴⁹⁵ Manning and McDowell, 93.

generation and distribution from the beginning of their administration in 1932. The technology and economy of this system was, however, subject to debate throughout the 1930s and 1940s. This discourse reveals the beliefs and biases underlying state-led electricity infrastructure development.

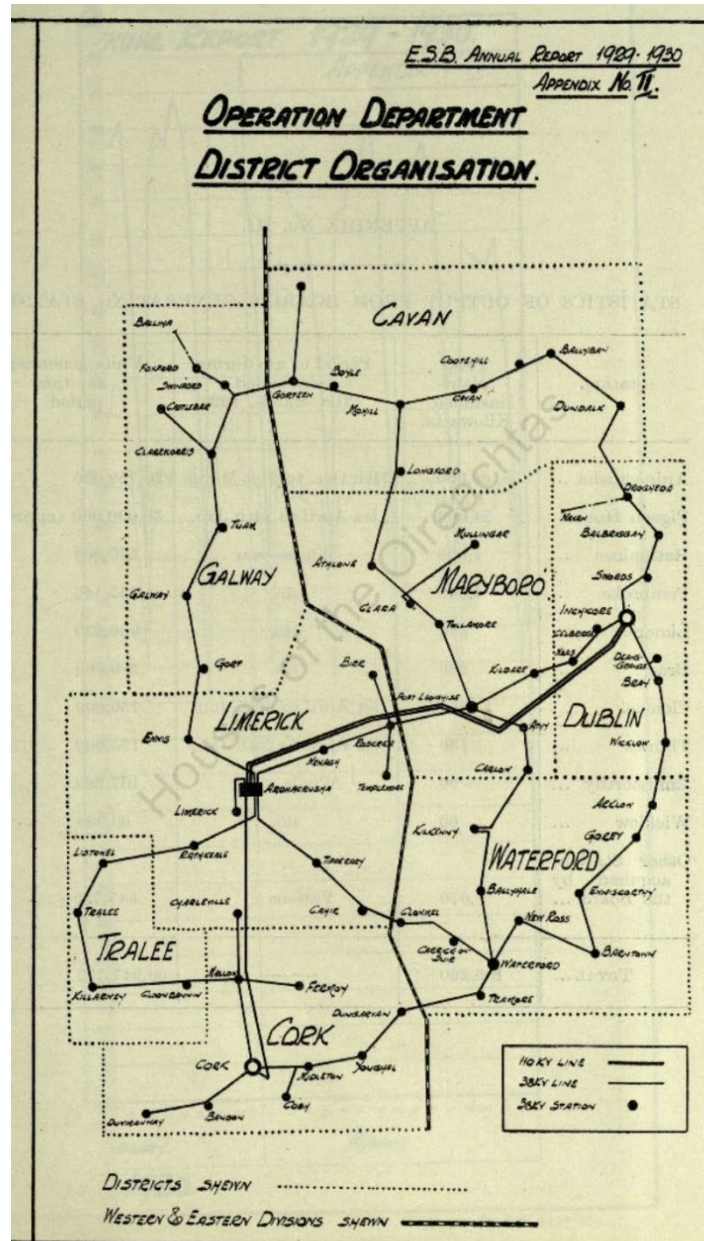


Figure 3.2 District organisation, in ESB, "Annual Report and Accounts of the Electricity Supply Board." (1930), 27.

This discourse is visible in files contained within the Department of the Taoiseach, along with materials from the ESB and the Turf Development Board. Within these files, correspondence and reports highlight the complex network of actors involved in the development of electricity

infrastructure, including the Department of Industry and Commerce, county surveyors, and industrial researchers. While the practicality and economy of infrastructure was important for these actors, they were also guided by beliefs about the value of natural resources and the places they were located. These materials are also incorporated to reveal the tensions between government and institutional actors in the process of electricity development.

As early as 1926, correspondence between Éamon de Valera and a Mr. P. Russell, detailed the opportunities and technicalities of tidal power, and its suitability or unsuitability for adoption by the Irish Free State.⁴⁹⁶ Russell, a shop fitter in North Strand in Dublin, was the brother of Irish Republican Seán Russell who had made the connection with de Valera. It is unclear how he gained expertise in power generation. However, Russell outlined a scheme in which water could be contained within a bay structure and a system of sluices and gated walls would generate a constant stream of water whose power could be harnessed through a mechanical turbine.⁴⁹⁷ The tidal power discourse extended beyond Russell, to include Laurence Kettle, a prominent engineer and advisor to the ESB, and Frank Gibney, the architect who would go on to design the housing schemes for Bord na Móna.⁴⁹⁸ These correspondences include the investigation of a potential tidal power scheme between Lettermore and Gorumna Island in Galway presented by the Department of Local Government and Public Health, and notes on investigations into a scheme along the Severn in England submitted by Kettle.⁴⁹⁹ The reliability of tidal energy over hydropower, Ireland's wealth of

⁴⁹⁶ Correspondence, letters, and reports from P. Russell to the Department of the Taoiseach, dated December 22, 1926 – July 14, 1932. NAI TAOIS/S2171.

⁴⁹⁷ Russell to the Department of the Taoiseach. NAI TAOIS/S2171.

⁴⁹⁸ Correspondence, letters, and reports from Laurence Kettle and Frank Gibney to the Department of the Taoiseach, dated November 24, 1942 – September 8, 1944. NAI TAOIS/S2171.

⁴⁹⁹ Department of Local Government and Public Health, "Investigation of Tidal Power at Carrickalegaun Bridge between Lettermore and Gorumna Island, Galway," dated June 27, 1944. NAI TAOIS/S2171; and Laurence Kettle, "Tidal Power," December 11, 1942. NAI TAOIS/S2171.

coastline, and the value of tidal power as a native energy source were all discussed as benefits of such schemes.

Frank Gibney argued for the establishment of a tidal power station on the Shannon Estuary between North Kerry and Clare in his report.⁵⁰⁰ He suggested this location due to its proximity to the Shannon Scheme and the potential for the development of chemical industries. He was aligned with the government's position at the time that relying on England for coal was a great economic disadvantage. He wrote, "economic necessity, the miracle of modern engineering, the ingenuity of native and world talent, and Irish civil courage, all allied with our natural advantages, surely should at least prompt us to investigate what is here proposed."⁵⁰¹ He went on to say that "it is a big job, or at least as big as we wish to think it is. And the cost? The price of national progress."⁵⁰² Like the Shannon Scheme before it, Gibney was invoking ideas of national progress in his proposal for an Irish energy system.

Ultimately, the discourse surrounding tidal power didn't gain any traction from within the ESB itself, but it is further evidence of the preference for national resource use in power generation, and the ways in which the economic and technological limitations and constraints could be approached. These investigations highlight an awareness amongst contemporary planners of the spatial challenges of electricity infrastructure development, with the costs of connection to existing transmission and distribution systems informing the overall economic considerations of the proposals.

The resource debate extended to hydropower and coal. In light of Fianna Fáil's commitment to the prioritisation of national energy sources, in 1933 the Department of Industry and Commerce requested three reports on the viability of the waters of the Liffey, Irish coal and peat respectively

⁵⁰⁰ Frank Gibney, "Tidal Power," report to Department of Industry and Commerce, dated September 8, 1942. NAI TAOIS/S2171.

⁵⁰¹ Gibney, 3.

⁵⁰² Gibney, 3.

for the generation of electricity from the ESB. In his report on the potential of a Liffey hydropower scheme, James McFay, a technical director with the ESB, recommended the installation of a 20,000 Kilo Watt station near Poulaphouca in County Wicklow.⁵⁰³ This scheme, he argued, would be cheaper than a solid fuel, steam boiler station and would allow the ESB to continue its relationship with the German company Siemens-Schuckert which had provided the technology for the Shannon Scheme. He also laid out the limitations of hydropower. He was concerned about the seasonality of the system where dry summers would mean a significant decrease in water levels. Furthermore, considering its proximity to Dublin, the scheme would also have to connect to the city's water supply which would make it further vulnerable. Despite these limitations, however, this proposal of the three was the one deemed most economical by the Department of Industry and Commerce.⁵⁰⁴

Thomas McLaughlin produced the report on the potential of Irish coalfields to supply power stations. He highlighted the shortcomings and limitations of the Irish coal position.⁵⁰⁵ Speaking specifically with relation to the mines in Castlecomer and Arigna, he argued that since they produced bituminous coal, this was unsuitable for the steam boiler station at Pigeon House which burned anthracite coal. To use Irish coal would thus require investment in new technologies. He argued that the recommended practice of locating a power station at the site of the coalfield would indeed save on the transport costs but, due to the location of the sites, in Kilkenny and Roscommon respectively, the costs of connecting to the existing Shannon transmission infrastructure would outweigh these savings.

⁵⁰³ James McFay, ESB, "Liffey Hydro Electric Scheme," dated August 28, 1933. NAI TAOIS/S2171.

⁵⁰⁴ Department of Industry and Commerce, "Provision for Generation of Further Power for Electricity Supply," Memorandum for Executive Council, dated September 30, 1933. NAI TAOIS/S2171.

⁵⁰⁵ Thomas McLaughlin, ESB, "The Possibility of Establishing a Steam Station in the Proximity of Some of the Saorstát Coalfields," dated August 28, 1933. NAI TAOIS/S2171.

He explicitly stated that “on the Shannon System Dublin is the most important point of supply, and any new generating station should be erected as closely as possible to Dublin.”⁵⁰⁶ McFay and McLaughlin’s reports both emphasised the prioritisation of the capital city in considerations of electricity generation, and the constraints imposed on such developments by the geographies of the energy sources themselves. In its recommendations to government based on these reports, the Department of Industry and Commerce acknowledged the fact that electricity infrastructure development was inherently “uneconomic.”⁵⁰⁷ They recommended that in order to provide this public good, the economic investment had to be borne by local authorities or the state itself.

The third report in the 1933 series was Thomas McLaughlin’s report on the viability of peat for steam power generation.⁵⁰⁸ He reiterated the familiar refrain that peat had an inferior calorific value per ton in comparison to coal. But he also acknowledged that many of the technical problems in the production of power from peat had been overcome in the peat industries in Germany and the Soviet Union. He used evidence for this from papers and reports he had gathered from these European peat producers. His ultimate conclusions, however, were that the concentration of the bogs in the midlands meant that although the cost of locating power stations in proximity to them would save on transportation costs, this saving would be ultimately outweighed by the cost of connecting the system to Dublin, where it was deemed most essential. As well as this, the stations would only be viable with a consistent peat supply of uniform quality which, in 1933, was not yet a reality.

The Fianna Fáil government in the 1930s developed frameworks to support the nascent peat extraction industry. As Chapter One shows, this was done using the accumulation of research, and policy and legislative measures. In considerations of power production within the wider peat

⁵⁰⁶ McLaughlin, 6.

⁵⁰⁷ Industry and Commerce, “Provision for Generation of Further Power for Electricity Supply,” 3.

⁵⁰⁸ Thomas McLaughlin, ESB, “The Possibility of Using Peat as a Fuel in a Steam Station,” dated August 24, 1933. NAI TSCH3/S8597.

industry, the location of the bogs and the question of supply continued to frame the debates surrounding the viability of such a system. Resolving these issues was central to the government's campaign to prove the feasibility of electric power generation from peat. In the process of establishing the technical and economic conditions necessary for peat-power, political and institutional discourse revealed underlying beliefs about the value of rural Ireland and peatland areas.

The delegation to Germany and the Soviet Union in 1935 was a crucial venture towards this aim.⁵⁰⁹ It also marked a continuity of the incorporation of international evidence to frame the possibilities of peat-power and the potential of Irish peatlands. The delegation included C. S. Andrews representing the Turf Development Board, P. G. Murphy representing the ESB, E. J. Duffy, a county surveyor, and Pierce Purcell. This collaboration foreshadowed the kinds of collaboration which would become essential between these various organisations and departments. The delegation's report described how the power stations in Meppen, Wiesmoor, and Shatura were using boilers with the same efficiency as coal-fired boilers.⁵¹⁰ In the report they wrote that "in the work accomplished both in Germany and Russia, that mechanically won peat fuel, when required, can be used on a large scale in Industrial plants and Electricity Power Stations, where the plant has been designed for that purpose, and the economics of the utilisation of turf in future Industrial and electricity developments is worthy of close examination."⁵¹¹ The technology of peat-power generation was discovered to be viable in other countries.

The scale of developments in Germany and Russia informed the belief that the economy of peat-power required large-scale state investment. The international perspective gained from this

⁵⁰⁹ As discussed in Chapter One; and Andrews et al., "Report of Peat Delegation to Germany and Russia."

⁵¹⁰ A case-study of the plant at Shatura is underway in Chapter Two of Katja Bruisch's forthcoming book *Burning Swamps*.

⁵¹¹ Andrews et al., "Report of Peat Delegation to Germany and Russia," 11.

trip informed debates surrounding the passage of the Turf (Use and Development) Act.⁵¹² Seán Lemass, in the 1936 debate, invoked this research and explicitly linked the levels of development observed in Germany and Russia with the desired outcomes of the Bill. He stated,

“those peat resources, which are in quality and in extent far inferior to ours, have been made the basis of great industries of importance to those countries. In Russia alone they are producing from peat electric power to several times the extent of the total consumption of electricity in this country. In Germany, not merely are they producing electric power from peat, but there is a number of industrial concerns where peat is used entirely for power and heating purposes.”⁵¹³

This comparative perspective was useful for Lemass in situating Ireland within a wider geographical perspective, as part of an international community of industrial peat producing states.

The experiences of the delegation facilitated this outward looking perspective on the one hand, but also provided an opportunity to reflect on internal regional narratives. Andrews, describing a visit to the power station in Meppen, Germany, said, “many of the bog owners around Oldenburg were at least of the second generation and some of them had been to university or a *Technische Hochschule*. They were far from being the ignorant backward bog men of the Irish myth.”⁵¹⁴ The invocation of the level of education and the sophistication of the owners of the German peatland plants was, for Andrews, a new perspective on the ways in which peatland development could create a better society. Despite claiming that the perception of the Irish “bog man” was a “myth,” it was clear that his experience in Meppen reinforced the historically

⁵¹² Turf (Use and Development) Act, 1936.

<https://www.irishstatutebook.ie/eli/1936/act/23/enacted/en/html?q=turf&years=1936>

⁵¹³Seán Lemass, speaking in Houses of the Oireachtas. “Committee on Finance. - Turf (Use and Development) Bill, 1935—Second Stage. – Dáil Éireann (8th Dáil),” text, April 28, 1936. Ireland. <https://www.oireachtas.ie/en/debates/debate/dail/1936-04-28/24>.

⁵¹⁴ Andrews, *Man of No Property*, 217.

constructed associations of peatland communities with backwardness. The production of electricity from peat was, for Andrews, a vehicle for a new kind of culture on the bogs.

International expertise was not universally favourable to the Fianna Fáil position. For example, a 1937 letter to Thomas McLaughlin from Dr Waldemar Borgquist, a high-ranking authority within the Swedish Electricity industry who had been involved in the development of the Shannon Scheme, cautioned against the use of peat for electricity production based on the Swedish experience.⁵¹⁵ He wrote, “at every point the result was less good than had been calculated.”⁵¹⁶ This letter made its way to the Department of Industry and Commerce in 1941, where then Minister Seán MacEntee cautioned Taoiseach Éamon de Valera that his public statements and the language used in promoting the successes of the peat schemes should be more restrained.⁵¹⁷

While the evidence gathered in Germany and the Soviet Union addressed some of the questions of the technological efficiency of peat steam boilers, economic and spatial concerns remained. Accounts of the ESB and TDB/BNM’s working relationship speak to the tensions between the two companies with regard to the establishment of peat power stations.⁵¹⁸ In a letter to Andrews in 1980 reflecting on the early stages of the peat-power debate, Paddy Cogan, who was the general manager of Bord na Móna from 1958 to 1976, detailed a list of objections put forward by the ESB in 1936.⁵¹⁹

⁵¹⁵ Manning and McDowell, *Electricity Supply in Ireland*, 27.

⁵¹⁶ Dr Waldemar Borgquist, “Swedish Peat Industry,” Letter dated July 9, 1937, 1. NAI TSCH/3/S8597.

⁵¹⁷ Seán MacEntee, “Letter from Dr. Borgquist,” Letter dated February 1, 1941. NAI TSCH/3/S8597.

⁵¹⁸ Clarke, *Brown Gold*, 76–79; Manning and McDowell, *Electricity Supply in Ireland*, 100–102.

⁵¹⁹ Paddy Cogan, “Relationship between Bord Na Móna and the ESB,” January 1980. UCDA P91/38.

According to Cogan, the TDB was in favour of situating power stations on peatlands; in particular, it had identified a site in Portarlinton, County Laois, linked to the peat extraction scheme at Clonsast. The ESB was critical of the material conditions of this site, citing inadequate water supply and poor ground conditions for foundations. The ESB further cited economic reasons for their aversion to the power stations, which included the cost of peat per ton, relative to the cost of coal, and the distance of Clonsast from Dublin, which would mean “transmission losses.”⁵²⁰ In 1936, the ESB recommended building a coal power station in Dublin.⁵²¹

Despite the seemingly oppositional relationship, communication and collaboration between the ESB, the Turf Development Board and the Department of Industry and Commerce for the establishment of peat-powered electricity stations continued through the 1930s and into the 1940s. In a memorandum for the Taoiseach from the Department of Industry and Commerce in May 1940, the timeline of this process was outlined with key communications and milestones.⁵²² In this memo, MacEntee made clear that the challenges with the project went beyond any political or ideological objections to the scheme.⁵²³ He called the scheme at Clonsast “not only difficult but extremely experimental in character.”⁵²⁴ He went on to state that “it will not be feasible to establish such a plant unless the Turf Development Board can guarantee a sufficient supply of suitable fuel at a price which will enable a generating station of economic size to be put down.”⁵²⁵

The major contribution of this memorandum was the assertion that the power station and the peat extraction schemes were completely interdependent. Considering the financial investment

⁵²⁰ Cogan, 1.

⁵²¹ Cogan, 1.

⁵²² Department of Industry and Commerce, “Memorandum on the Negotiations with the Electricity Supply Board Concerning the Erection of a Peat Burning Generating Station,” dated May 17, 1940. NAI TSCH/3/S8597.

⁵²³ Industry and Commerce, “Memo.”

⁵²⁴ Industry and Commerce, 9.

⁵²⁵ Industry and Commerce, 9.

that had already been undertaken in peat development on the bogs at Clonsast and elsewhere, this was framed as a sunk cost if further investment in a power station was not taken. Electricity generation was thus inexorably linked to the efficient production of peat at TDB sites. The plans for Portarlinton Station were sent out to tender in 1939, with the Second World War beginning just months later.

As Chapter Two shows, the conditions of the Second World War shaped the momentum that the FF administration needed to expand the project of peat extraction. Fuel shortages necessitated a major increase in the production of peat fuel. While opposition and resistance to peat power stations had been framed in relation to technological and economic concerns, much of this framing was linked to the stability of fuel supply. The expansion of the peat industry during the war was therefore fundamental in establishing stable supply chains of peat fuel, which could serve future power generation.

Two major legislative interventions following the war reflected the belief that the supply problem had been solved by the expansion of Bord na Móna peat works, and that peat could be a viable fuel for electricity generation. What they also demonstrated, however, was a set of underlying beliefs about regional development, and what this should look like in the context of peat-power. The 1946 Turf Development Act authorized the establishment of peat-burning power stations at Portarlinton in Laois and Allenwood in Kildare, in proximity to the Bord na Móna works at Clonsast and Timahoe respectively.⁵²⁶ Furthermore, the Act stipulated that “all new projects for the production of electricity, otherwise than by water power, shall be based on the use of turf.”⁵²⁷ This legislation prioritised the use of peat for power, and as such situated peat-producing areas at the centre of developmental investment.

⁵²⁶ Turf Development Act, 1946.

<https://www.irishstatutebook.ie/eli/1946/act/10/enacted/en/html?q=turf+&years=1946>

⁵²⁷ As outlined in the Turf Development Programme, See “The Turf Development Programme,” (Dublin: Department of Industry and Commerce, 1946), 3.

The Rural Electrification Scheme was sanctioned within the 1946 Electricity (Supply) (Amendment) Act.⁵²⁸ The scheme made provisions for the extension of electricity supply to rural communities and farms. The framework for this project was outlined in the 1944 *Report on Rural Electrification*.⁵²⁹ In this document, it was identified that over half of the population of the country was without electricity supply as a consequence of remoteness and the isolated nature of settlement distribution in rural areas.⁵³⁰ ‘Rural’ in this case was understood as towns or villages with less than 200 inhabitants or scattered dwellings outside the existing ESB transmission network.⁵³¹

In political discourse, this initiative was explicitly linked to the development of peat power stations. In the government debate surrounding this legislation, Lemass stated that “it is not possible to meet our electricity requirements by water-power stations alone, because the output of these stations depends largely upon climatic conditions, and regularity of supply cannot be guaranteed. It is necessary, therefore, to supplement these stations by steam stations. Plans are being considered for the provision of additional steam stations, using turf as fuel.”⁵³² That the government was invested in transforming the economy of rural Ireland into an industrially viable system was clear in the post-war era. State interventions included the establishment of the Industrial Development Agency, An Foras Tionscail, and Gaeltarra Eireann.⁵³³ These were all state agencies with mandates and funding to invest in and support rural enterprises.

⁵²⁸ Electricity (Supply)(Amendment) Act, 1945.

<https://www.irishstatutebook.ie/eli/1945/act/12/enacted/en/html?q=electricity&years=1945>

⁵²⁹ ESB, *Report on Rural Development* (Department of Industry and Commerce, 1944).

⁵³⁰ ESB, *Report on Rural Development*, 9.

⁵³¹ ESB, *Report on Rural Development*, 9.

⁵³² Seán Lemass speaking in Houses of the Oireachtas, “Public Business. - Electricity (Supply) (Amendment) Bill, 1944—Second Stage. – Dáil Éireann (12th Dáil),” text, January 24, 1945, Ireland.
<https://www.oireachtas.ie/en/debates/debate/dail/1945-01-25/31>

⁵³³ Frank Barry and Micheal O Fathartaigh, “The Industrial Development Authority, 1949 - 58: Establishment, Evolution and Expansion of Influence,” *Irish Historical Studies* 39, no. 155 (2015): 460–78.

The discourse and debate surrounding the generation of electricity from peat represented government and institutional contestation over the value of Irish resources, and the overcoming of material, economic, and geographical constraints. The history of electricity development requires an understanding of the pathways to production, but also the choices made regarding the dissemination of electricity. The entanglements between the state's organisation of peat extraction and the establishment of peat power-stations necessarily reproduced ideas of national sovereignty and energy security within the infrastructure of power stations. But these power stations simultaneously inherited the cultural associations of peat as the traditional, rural fuel.

IV. Translated in practice into light and power

In the following analysis, this chapter presents two case studies of peat-burning power stations. These cases demonstrate the technological and geographical priorities and challenges for government and institutional actors. The first category is the *midlands* stations, which were large, high-capacity stations developed in the midlands of Ireland, with the exception of the station at Bellacorrick in County Mayo.⁵³⁴ These stations encapsulated the symbolic prestige of large infrastructure projects in the mindset of political actors as well as the collaboration between national energy institutions and international peat industries. The second category is the *western* stations which were small, low-capacity stations built in remote locations in the west of Ireland. These stations embodied the challenges of rural development for the Irish government in the post-war era and the reproduction of beliefs, attitudes, and modes of engagement with these regions.

⁵³⁴ The midlands region here includes counties Kildare, Laois, Longford, and Offaly,

Beginning with Portarlinton Station which began producing electricity in 1950, the midlands region encompassed the power stations of Allenwood in County Kildare (1952), Ferbane in County Offaly (1957), Lanesboro in County Longford (1958), Rhode in County Offaly (1960), Bellacorrick in County Mayo (1962), and Shannonbridge in County Offaly (1964). Figure 3.3 is taken from Pat Culleton and Jon McCowan's *Portarlinton Generating Station, 1946-1988, A Pictorial History*.⁵³⁵ This ESB-funded local history monograph presents an image of a coherent industrial region in the midlands, despite the clear geographical exception of Bellacorrick in the west of Ireland.

These projects, including Bellacorrick, had several commonalities. Their scale meant that they materially impacted the local landscape and economy. They contributed to the national grid and thus the electrification of the nation. They were all proximate to Bord na Móna peat works which guaranteed a steady supply of peat fuel for combustion. In the midlands, these were all raised bogs, for example Portarlinton was fuelled by peat from Clonsast, Allenwood from Timahoe, etc. In Bellacorrick, the fuel came from the BNM works at Oweninny blanket bog. And, finally, in the promotion and perceptions of these power stations they were understood as drivers and symbols of the project of Irish state building and modernisation. Through technological development and economic efficiency, these power stations and their associated infrastructure remade the midlands region into a model of national progress.

⁵³⁵ Pat Culleton and Jon McCowan, *Portarlinton Generating Station, 1946-1988: A Pictorial History* (ESB, 2006), 43.

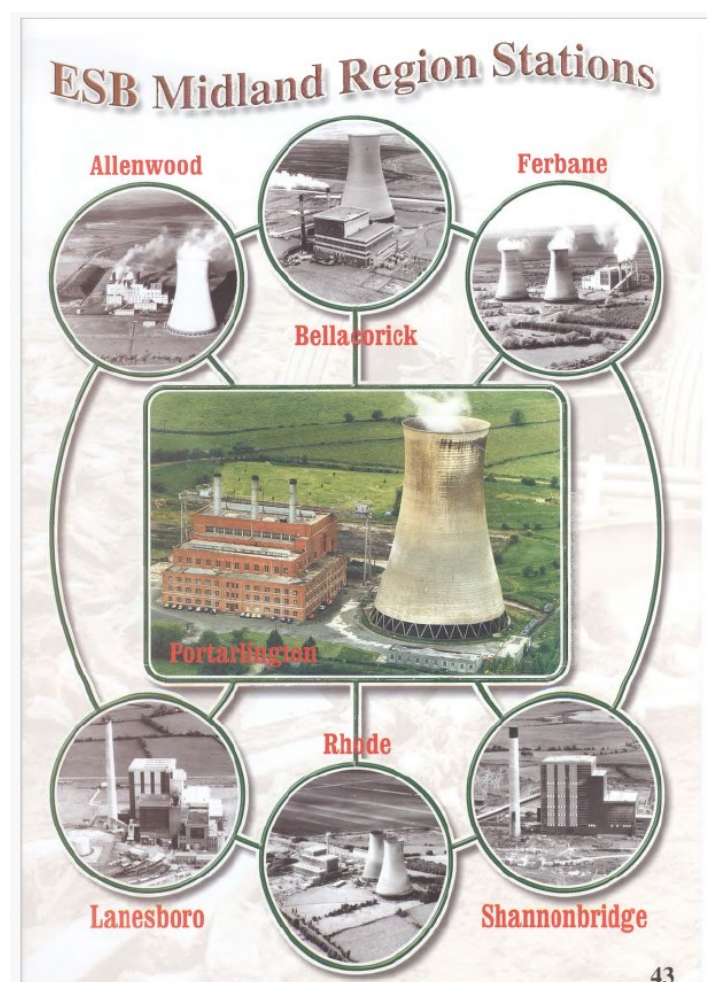


Figure 3.3 "ESB Midland Region Stations," in Pat Culleton and Jon McCowan, *Portarlington Generating Station, 1946-1988: A Pictorial History* (2006), 43.

The supply chain between the Bord na Móna peat works and the ESB power stations was a key organising principle of the midlands stations. The systems of large-scale extraction of peat facilitated the steady flow of fuel to the station boilers. Chapter Two describes the increased industrial infrastructure developed at the sites of peat works. This industrial workscape was deeply entangled with the generation of electric power.

The placement of the power stations on the bogs themselves did not mean there was no supporting infrastructure necessary, but it did concentrate the development of infrastructure, such as rail links and storage facilities, to these specific locations. This network is evident in figure 3.4, taken again from Culleton and McCowan, which indicates the locations of the peat works of

Clonsast, Garryhinch, Derrylea, and Derryounce, as well as the power station.⁵³⁶ The network of rail lines connecting these is also indicated on the map, as well as workers' housing schemes. Produced by BNM, this map reveals the ways in which these complex landscapes were rationalised by institutions to facilitate their management.

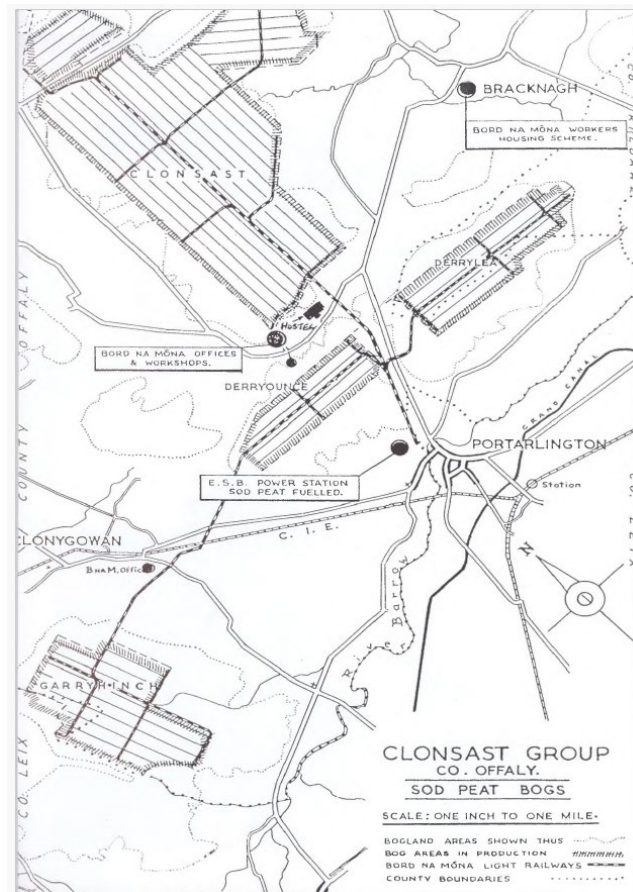


Figure 3.4 Bord na Móna map of Clonsast Group, c.1950s in Pat Culleton and Jon McCowen, *Portarlinton Generating Station, 1946-1988: A Pictorial History* (2006), 19.

In order to create electrical energy from peat, peat fuel was burned and converted into steam in large boilers. The steam rotated turbines which converted this mechanical energy into electrical energy in a generator. What O'Reilly described as the transformation of “the dark brown

⁵³⁶ Culleton and McCowen, *Portarlinton Generating Station*, 19.

sod” of peat to “the light blue bolt of electricity.”⁵³⁷ This system of power production had been developed for the use of coal. For engineers using peat, the technical challenge was the inconsistencies of the fuel as it arrived at the station. In the midlands stations, specialised techniques of drying the fuel before it reached the boilers and loading systems that would feed the fuel steadily into the boilers were essential in the design process. The technology of the power stations thus represented a significant achievement in the field of engineering.

A fascination with this technology permeated media and scientific representations of the stations in the midlands. The sensory experience of proximity to these large machines became ubiquitous in describing the industrial midlands. For example, in the national radio broadcast describing the opening of Portarlinton, P.P. O’Reilly described “the steam rise and the water jet from a hundred and more pipes. Water from the condensers heated in its turn by the cooling flow of many pipes passing through the intricate yet massive machinery in a powerhouse at Portarlinton.”⁵³⁸ This description presented the multiple scales of operation within the technology; it could simultaneously be both massive and intricate. Similarly, following the opening of the station in Ferbane in 1957, a reporter claimed that “the noise of the intricate and giant machinery working the station is clearly audible at Ferbane three miles away.”⁵³⁹ The sensory representation of this advanced mechanical infrastructure contributed to new experiences and understandings of the industrialised midlands.

The work and innovation underpinning these schemes also featured in descriptions of these projects. The media rhetoric surrounding the establishment of the stations emphasised “the skill of the engineers,” “years of work, set-backs, and ultimate triumph for the great team of men,” and

⁵³⁷ “ESB Turf Plant in Portarlinton,” *P. P. O’Reilly Talk*.

⁵³⁸ “ESB Turf Plant in Portarlinton,” *P. P. O’Reilly Talk*.

⁵³⁹ “Ferbane Power Station in Production,” *Offaly Independent*, March 30, 1957, 5.

“assiduous study and imaginative planning, followed up by determined and courageous work.”⁵⁴⁰

This commentary embedded the human in the mechanical, bringing to the fore the multidimensional process of human skills and intellect that were necessary in the realisation of these complex and innovative projects. It further laid out a linear narrative of progress about the midlands power stations. They were presented as material and technological realisations of years of pioneering and relentless work on the part of state planners and administrators. This narrative naturally excluded the resistance to the power stations prior to the 1950s.

The state’s choice of the midlands for this industrial development was informed by beliefs about the value of the non-human environment. A clear contrast was established between the imagined expanse of useless, unproductive midlands bogs and the modern electric landscape. Reporting on the opening of Portarlinton in 1950, for example, journalist Stephen Desmond encouraged readers,

“contemplate what has been done: think of the barren acres of bog – useless except to the dwellers whose homesteads bordered the cold waste, and who nibbled at the edges of the banks. This “useless” bog might well have returned to its earlier insignificance, but for a bold, yet obvious plan to utilise it.”⁵⁴¹

This image of the barren, cold waste reinforced earlier beliefs about the bogs of the midlands, where even local dwellers were presented as incapable of garnering value from their environments. While the existence of communities in proximity to the bogs was acknowledged, Desmond echoed the language of colonial improvement. The state, through BNM and the ESB,

⁵⁴⁰ *Minister Opens Portarlinton Power Station* (British Pathé, 1950); Stephen Desmond, “Electricity from Ireland’s Bogs: Work of Years Rewarded at Portarlinton,” *Irish Independent*, April 17, 1950, 4; and “Portarlinton Power Station,” *Evening Echo*, April 17, 1950, 1.

⁵⁴¹ Stephen Desmond, “Electricity from Ireland’s Bogs: Work of Years Rewarded at Portarlinton,” *Irish Independent*, April 17, 1950: 4.

was presented as finally realizing the value and potential of the bogs through industrial development.

The article went on to emphasise the significance of electric power for the nation and the ways that Portarlinton was becoming distinguished by its industry.⁵⁴² This association of the midlands stations with national progress was also evident in the conclusions of US geographer Albert McCarthy. In 1955 McCarthy underwent collaborative field work with the ESB and BNM. This work led him to echo the belief that Ireland's "deserts" had been improved.⁵⁴³ He considered the midlands power stations as an important step in the progress of the nation. In his 1957 paper, he wrote,

"the year 1950 witnessed one of the most important steps in the modernization of Ireland when the first peat-burning steam-electric station was commissioned at Portarlinton, County Laoighis. Peat is Ireland's most abundant resource, but in some ways it has been as much a liability as an asset. Although people have for centuries depended on peat for fuel, their laborious cuttings around the edges have in few places reduced appreciably the area of "Ireland's deserts," which cover one-seventh of the country."⁵⁴⁴

Within his descriptions of the technological modernity, McCarthy similarly dismissed the historical labour of local communities as having been insufficient to fulfil the real value of the bogs.

National media framed the establishment of the station at Portarlinton using the same contrast. In a film produced by Pathé News, the British news and documentary production company, images of the opening of the station were narrated using the framing of modern industry

⁵⁴² Desmond, 4.

⁵⁴³ Albert J. P. McCarthy, "The Irish National Electrification Scheme," *Geographical Review* 47, no. 4 (1957), 544.

⁵⁴⁴ McCarthy, 543–544.

versus wasteland.⁵⁴⁵ This is clear in the narrator's remark, "by using the natural fuel of the land, peat, Portarlinton Power Station achieves two successes: it eases Ireland's balance of payments and it restores hitherto useless land to fertility." The report goes on, "by this brilliantly conceived revolutionary scheme, what was once the impassible marsh of Clonsast has been transformed into a bustling industrial centre employing up to a thousand people."⁵⁴⁶ This film further incorporated the idea that the regional development of the midlands was part of the wider development of the nation, "in this way, land that had been idle for centuries is being used to further the economic progress of the people of Ireland."⁵⁴⁷ This narrative was reinforced by the material impact of the addition of peat-power to the national grid.

This rhetoric was not limited to national discourse. Examples from a BNM-organised visit to the Soviet Union in 1956 reveal the centrality of the midlands power stations in rhetoric showcasing Irish industry. Not only were the stations themselves invoked, but also the ways in which their development represented a successful mastery of nature. This was evident in a speech C. S. Andrews, gave to the Soviet ministry as part of the delegation. He said, "we in our small way have accepted the challenge of this intractable material and like you have changed large areas of our countryside from wastelands to prosperous."⁵⁴⁸ As well as this, he stated his realisation that "advances of humanity are in direct response to the challenge of nature."⁵⁴⁹ He went on to state that he "was immensely struck by a dictum of your great scientist Mathurin [sic] I saw at the agricultural exhibition to the effect – I quote from memory – 'that we must not wait for nature to offer us her bounty; we must wrest her gifts from her.'"⁵⁵⁰ This speech was given in the context of

⁵⁴⁵ *Minister Opens Portarlinton Power Station* (British Pathé, 1950).

<https://www.britishpathe.com/asset/85392/>

⁵⁴⁶ *Minister Opens Portarlinton Power Station* (British Pathé, 1950).

⁵⁴⁷ *Minister Opens Portarlinton Power Station* (British Pathé, 1950).

⁵⁴⁸ CS Andrews, "Speech at Tormal Minister's Dinner on 19th" (USSR, 1956). UCDA P91/28.

⁵⁴⁹ Andrews, "Speech."

⁵⁵⁰ Andrews, "Speech."

an investigation of, among other things, the use of milled peat in power generation in the USSR. Andrews understood that the challenge of peat in 1956 continued to be one of overcoming the material limitations and constraints of peat but that much of this work had already been achieved.

Part of the longevity of the midlands region was in its ability to replicate and innovate the technology of power generation over time. The efficiency of the peat power stations required constant research and development. In a paper which detailed this process, given at the First International Peat Congress in Dublin in 1954, engineer with the ESB P. Cooney concluded that “the combustion of sod peat is still attended by many difficulties which do not exist in the burning of coal and oil, and much work remains to be done by the engineer and the chemist in close collaboration before the efficiency and availability of peat burning installations are raised to the desired optimum.”⁵⁵¹ The stations at Portarlinton and Allenwood had been built to accommodate machine-won sod peat from the surrounding peat works. The kinds of innovation and experimentation required to achieve Cooney’s “desired optimum” developed in parallel with Bord na Móna’s transition to milled peat extraction.

As Chapter Two describes, the transition to milled peat was central to the Board’s mission to reduce costs and labour, and to maximise the utility of their product in briquette manufacture and power generation. In a special edition of the journal *Administration*, Paddy Cogan outlined how the power station at Ferbane succeeded in this objective. He wrote,

“it was agreed after further discussions to proceed with the design and construction of Ferbane Station based on milled peat. The success achieved by the engineers of the Electricity Supply Board in carrying out this project is self evident in the Ferbane Station, which has completed in March, 1958, a year’s running inclusive of some trial operation for testing and the clearance of teething troubles. The Station is of 60 megawatt capacity and has three boilers associated with three 20 megawatt turbines. The plant is planned to consume 500,000 tons of milled peat per annum. The fuel cost per unit at this station was the lowest from the thermal stations in Ireland in the year ended 31st March, 1958, and, in

⁵⁵¹ P. Cooney, “Combustion of Sod Peat in a Power Station,” in *Utilisation - Large Scale Plant* (International Peat Symposium, Dublin, 1954), 14.

spite of the disastrous weather of the 1958 summer, it should remain competitive with imported fuels at present price levels.”⁵⁵²

Cogan’s remarks encapsulate the reciprocal process of the development of the midlands region. Collaboration with the peat industry triggered innovation in power generation. In order to achieve the broader goals of industrialisation and development, these sites in the midlands became spaces of experimentation.

As a result, the midlands became a focal point for inward and outward flows of knowledge, technology, and resources. While a crucial part of the discourse surrounding the establishment and promotion of the power stations was the idea of the nation and the utilisation of a national fuel source, this national focus expanded to a wider network of international collaboration. The clearest manifestation of this international dimension to the midlands power stations was in the physical, technological components required for the building and operation of the power stations. For instance, the boiler plant in Portarlinton was designed and constructed by the English subsidiary of the American company Babcock and Wilcox Ltd.⁵⁵³ And although the main building works used an Irish contractor, the cooling tower itself was constructed by a Dutch company, Mounsel.⁵⁵⁴ This kind of international contracting was the standard in Irish electricity projects, as in Ardnacrusha with Siemens, due to the levels of expertise and resources necessary in the production of these machines and structures which Ireland did not have.

In the area of research and development, the historical relationships between Irish and international peat industrialists were extended in the 1950s and 1960s. Informed as it was by the peat delegation to Germany and the Soviet Union in 1935, the station at Portarlinton sparked further collaborations and knowledge exchange between these countries in the post-war era. A clear

⁵⁵² Paddy Cogan, “Milled Peat for Electricity Generation - A New Development,” *Administration*, Bord na Móna, 7, no. 1 (1959), 23.

⁵⁵³ Electricity Supply Board, *Portarlinton Power Station* (Dublin: The Temple Press, 1950), 31.

⁵⁵⁴ Mullins, *A History of Portarlinton Generating Station*, 34.

example of the international dimension of research in the midlands is in the case of Ferbane power station. Through aid provided by the Economic Co-operation Administration (Marshall Plan), in 1951 the Irish government commissioned a report by the Battelle Institute, a US consultancy firm, to explore various aspects of peat industrialisation, including the use of milled peat for power generation.⁵⁵⁵ This report compared evidence from the USA, Canada, England and West Germany to determine the viability of such a project in Ireland, ultimately concluding its merits and establishing links between these various countries and Ireland.⁵⁵⁶ As well as this, delegates from Bord na Móna, including C. S. Andrews, conducted a visit to the USSR in 1956 to conduct further research on the operations of milled peat power stations, which directly influenced operations in Ferbane station.⁵⁵⁷ By the time it was in operation in 1957, the experience and expertise of a complex network of international peat industries had informed its design and organisation. These networks transcended political boundaries and Cold War era silos.

Another important avenue for the international exchange of information were the International Peat Congresses, beginning in Dublin in 1954. While the overall aims of the congresses were more broad than simply electricity generation, this application of peat fuel formed an important part of the proceedings. The international platform accelerated a transition for Ireland, as the midlands region became more established, from fledgling industry to leader in peat-fired power generation. This is clear in a paper from the Second Congress in Leningrad in 1963, given by a German engineering firm on Ireland's position in the industry. The paper claimed that "Ireland has much to contribute to the study of peat-fired boilers, and the present paper should be a valuable contribution to the literature on the utilization of peat as fuel in power stations. In no other country

⁵⁵⁵ Paddy Cogan, "Milled Peat for Electricity Generation - A New Development," *Administration*, Bord na Móna, 7, no. 1 (1959), 23.

⁵⁵⁶ R.A. Sherman, "Report on the Utilization of Peat to the Government of Ireland" (Battelle Memorial Institute, 1951). ESBA.

⁵⁵⁷ C. S. Andrews, Paddy Cogan, and Lewis Rhatigan, "Report of Delegation from Bord Na Móna Which Visited the U.S.S.R." (Bord na Móna, 1956). UCDA P91/33.

in Western Europe has the conversion of peat into energy been carried out so thoroughly as in Ireland.”⁵⁵⁸ The midlands stations cemented Ireland’s privileged position in the peat-producing nations of the world.

Quoting again from Desmond’s report on the opening of Portarlinton, he wrote that “this was an Irish “show,” an Irish idea; it was pioneering, and bold at that; it was to arouse the interest and admiration of engineers and Governments in many countries, whose representatives (from America to India) came to Portarlinton and walked through the sticky mud to examine and ask questions; to praise and to criticise; and finally to congratulate.”⁵⁵⁹ This new positionality for Ireland was significant. While previously, experts like Purcell and Andrews had looked outward for technological and operational expertise, from the 1950s onwards, Ireland became an international leader in peat extraction and power generation.

Evidence of foreign interest in the midland power stations is clear from newspaper archives. In 1956, a delegation that included the British Ambassador to Ireland visited the site at Ferbane to observe its progress.⁵⁶⁰ This influx of interested outsiders had a significant impact on these sites with a report from Ferbane’s opening claiming that “at one period, the accents and languages of at least 10 different countries of Europe were to be heard there and conspicuous among them was the mellifluous Gaelic accents of the Connemara men.”⁵⁶¹ As Chapter Two describes, the industrial development of the midlands region was made possible by the influx of labour, primarily from the west of Ireland. The technological appeal of the power stations initiated a further influx of international researchers and engineers to the midlands region.

⁵⁵⁸ Wasserrohrkessel-Verband, “Progress and Experience in Firing Peat in Steam Boiler Installations,” in *Production, Transportation and Utilization* (Second International Peat Congress, Leningrad, 1963), 388.

⁵⁵⁹ Desmond, “Electricity from Ireland’s Bogs,” 4.

⁵⁶⁰ “Diplomats Visit Peat Plant,” *Irish Press*, June 5, 1956, 5.

⁵⁶¹ “Ferbane Power Station in Production,” *Offaly Independent*, March 30, 1957: 5.

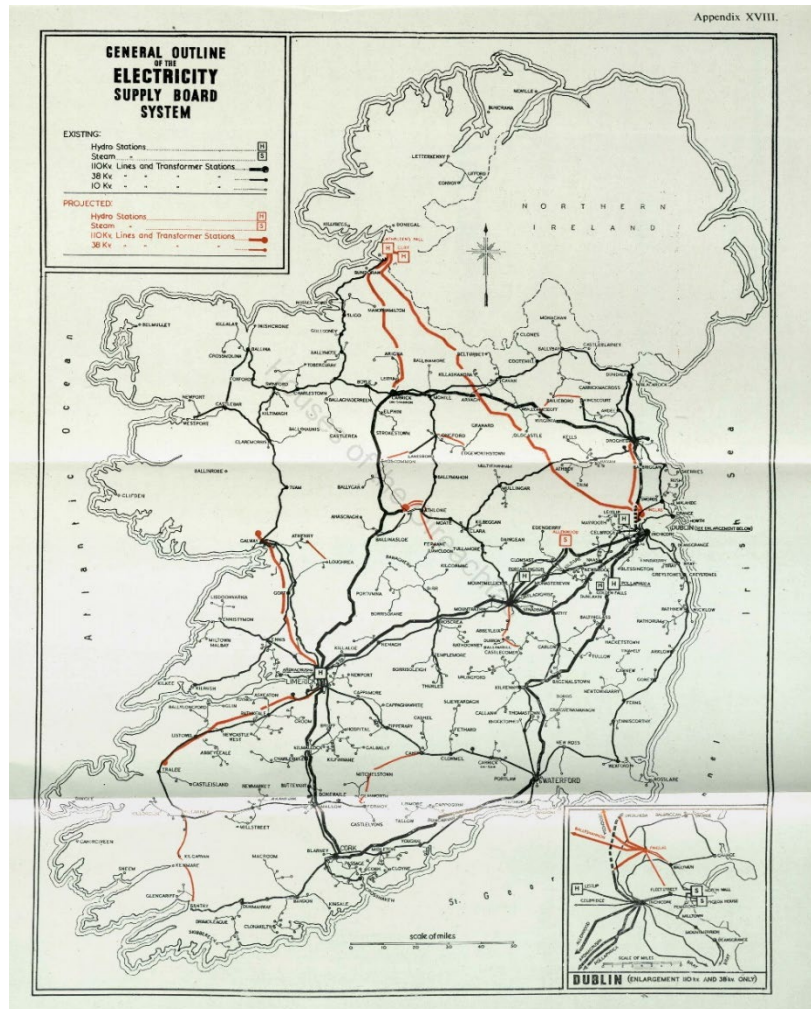


Figure 3.5 ESB transmission system in 1950, in “Annual Report of the Electricity Supply Board Ireland” (1950), Appendix XVIII.

Beyond this regional impact, the addition of peat power stations contributed significantly to the national grid. Figure 3.5 shows a transmission network map produced by the ESB in 1950.⁵⁶² Between the addition of Portarlinton to the network, in black, and the proposed power stations and transmission systems, in red, greater distribution of electric power was made possible throughout the 1950s, parallel to the expansion of the rural electrification scheme.

⁵⁶² ESB, “Annual Report of the Electricity Supply Board Ireland” (ESB, 1950), Appendix XVIII.

By 1965, with the milled peat station at Shannonbridge contributing to the national grid, peat accounted for almost 32 per cent of all electricity generation in Ireland.⁵⁶³ This share of the energy market increased to almost 40 per cent by the end of the 1960s.⁵⁶⁴ As figure 3.6 demonstrates, while peat was utilised alongside hydropower, oil, and coal in the production of electricity, it nonetheless represented the largest contributor to the energy market.⁵⁶⁵ The increased capacity of the ESB network resulted in increased connections of rural consumers to the transmission network. By 1965, 300,000 households had been connected to the national grid as part of the RES.⁵⁶⁶ The peat stations therefore were linked to overall national development, as well as rural development.

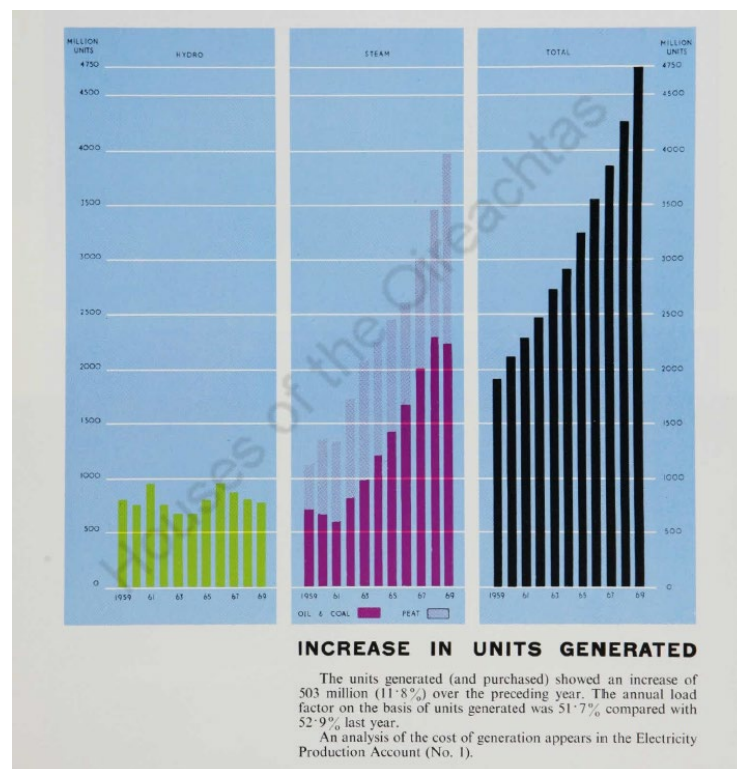


Figure 3.6 “Increase in units generated,” in “Annual Report of the Electricity Supply Board Ireland” (1969), 11.

⁵⁶³ ESB, “Annual Report of the Electricity Supply Board Ireland” (ESB, 1965), 2.

⁵⁶⁴ Manning and McDowell, *Electricity Supply in Ireland*, 120.

⁵⁶⁵ ESB, “Annual Report of the Electricity Supply Board Ireland” (ESB, 1969), 11.

⁵⁶⁶ ESB, “Rural Electrification,” ESB Archives, Accessed January 13, 2023.

In 1957, Albert McCarthy wrote that, “in a little more than three decades as Free State and Republic, Éire has progressed from being almost without electricity to a condition in which electric power is widely available and will be available everywhere in the near future. In the next few decades, it will play an important part in changing the life, and geography, of the country.”⁵⁶⁷ As part of a national project of development that included the rural electrification scheme, the midlands stations contributed significantly to the modernisation and industrial progress of the nation. Reflecting on this impact in 1959, Paddy Cogan stated that,

“Very broadly speaking, this installed capacity means employment for 2300 people where it is most needed, in the Irish Provinces. It means the avoidance of coal or oil imports to the value of approximately £3,000,000 per annum. It means the removal of 30,000 acres of hitherto useless bogland and its eventual replacement by an equivalent of arable or forest lands. It should bring satisfaction to all those interested in Irish enterprise and national advancement that the joint efforts of Bord na Móna and Electricity Supply Board engineers had such a successful outcome. It sets a headline of Irish enterprise and provides an argument to help to deal with that unfortunate national surplus, in effect more serious than our adverse trade balances, the ‘it can’t be doners.’”⁵⁶⁸

His reflection acknowledged the contributions on a national scale and further spoke to the significance of the stations to the midlands region specifically. Alongside the Bord na Móna works, these power stations were significant sources of employment. They further facilitated the establishment of training and education programmes in electrical and mechanical engineering. Richard Mullins, reflecting on the impact went as far as to claim that the power station at Portarlinton “encouraged an essential change in attitude that permitted a break from traditional methods of behaviour.”⁵⁶⁹ As shown in Chapter Two, the complex network of infrastructure that

⁵⁶⁷ McCarthy, “The Irish National Electrification Scheme,” 554.

⁵⁶⁸ Paddy Cogan, “Milled Peat for Electricity Generation - A New Development,” *Administration*, Bord na Móna, 7, no. 1 (1959): 24.

⁵⁶⁹ Mullins, *A History of Portarlinton Generating Station*, 47.

linked peat extraction to electricity generation at the sites of the midlands power stations created a new industrial landscape in these places.

This transition from historically underdeveloped ‘wastelands’ was further reinforced by the introduction of housing schemes to serve workers from the ESB and BNM. The BNM housing schemes in particular contributed to the modern reimagining of the midlands. BNM’s vision for the housing schemes was based on rural values and “modest self-sufficiency.”⁵⁷⁰ But according to C. S. Andrews, the efforts of the architect tasked with the project, Frank Gibney, and the general manager, Dermot Lawlor, “resulted in the creation of villages of a quality far surpassing anything of the kind previously seen in Ireland.”⁵⁷¹

There was some controversy surrounding the housing schemes, as a change of political power in 1948 saw the Fine Gael government less concerned with moving forward on a project that was central to the policy aims of their political rivals. As well as that, there was a suggestion by the Minister for Local Government Dan Lawlor that the housing should be constructed as stand-alone, scattered dwellings, more in line with what he perceived to be the template for rural Irish settlements.⁵⁷² Ultimately, this was decided against as impractical for the provision of services and utilities to the workers’ accommodations.⁵⁷³

⁵⁷⁰ Fergal MacCabe. *Ambition and Achievement: The Civic Visions of Frank Gibney*. Dublin: Castles in the Air Publications, 2018, 20.

⁵⁷¹ Andrews, *Man of No Property*, 307.

⁵⁷² MacCabe. *Ambition and Achievement*, 24.

⁵⁷³ According to political ecologist Patrick Bresnihan and media and communications scholar Patrick Brodie, the realities of conditions in the housing schemes, and the limitations of the midlands stations to adequately provide the kinds of development that state actors desired, deem it an “unfinished project of a rural modernity.” In Patrick Bresnihan and Patrick Brodie. Forthcoming. *From the Bog to the Cloud: Dependency and Eco-Modernity in Ireland*. Bristol University Press, 19.

That the midlands had been transformed by the development of the power stations was clear in media reports surrounding their establishment. An article in the *Nenagh Guardian* from 1950 described, “going by train to Dublin these months back one noticed just outside Portarlinton, an immense 236-foot high bollard-shaped tower reaching into the skies from a site by the banks of the Barrow. This structure is the cooling tower of the new station, the symbol of an engineering dream that became a practical reality on Wednesday.”⁵⁷⁴ Of the Ferbane station, articles described, “the huge cooling towers each 266 feet high, are by far, the most conspicuous landmark on this part of the Midland landscape;”⁵⁷⁵ and “one of the sights of the midlands really worth seeing is that of the diesel trains entering the Ferbane Power Station with milled peat to fill the furnace at present in operation.”⁵⁷⁶ The imposition of these immense structures into the expanse of the raised bogs generated a new landscape in the midlands.

Reflecting on the impact of the physicality of the power station in Portarlinton, historian Richard Mullins writes,

“construction forged ahead through a bitterly cold winter and an even colder spring in 1947, but, in late summer of that year, the tower scaffolding pierced the sky-line. Slowly climbing higher and higher, its final shape and height dwarfed all other buildings to such an extent that the town itself became Lillipution. Featuring as the most prominent structure in this part of the midlands, one is scarcely outside Monasterevin on the Bog road to Portarlinton that it looms in the distance.”⁵⁷⁷

As well as the material and economic impact of the midlands power stations, they functioned as symbols of national and regional prosperity and progress. Their construction, operation and maintenance were made possible through the kinds of technological, economic, and

⁵⁷⁴ “Another Milestone of Progress,” *Nenagh Guardian*, April 11, 1950: 4.

⁵⁷⁵ “Ferbane Power Station in Production,” *Offaly Independent*, March 30, 1957: 5.

⁵⁷⁶ “Ferbane Notes,” *Offaly Independent*, May 11, 1957: 3.

⁵⁷⁷ Richard J. Mullins, *A History of Portarlinton Generating Station and Clonsast Bog Development* (Portarlinton: Richard J. Mullins, 1993): 46.

organisational principles that both imperial and national actors had envisaged. Andrews in 1953 framed it as such, “we who work in turf have gotten the better of the bog. We are getting rid of it rapidly, and if whole burnt offerings are acceptable to the ancient Celtic gods they should be well satisfied with the temples at Allenwood and Portarlinton.”⁵⁷⁸

The Western Stations

In the west of Ireland, development of the infrastructure of peat-power followed a different route than the midlands stations. Contrary to the driving forces of efficiency and economy that underpinned the establishment of Portarlinton and Ferbane, development of the western stations emerged as the solution to the social problems associated with life in the rural periphery. While the primary force in the establishment of the midlands schemes was the mechanisation of peat extraction on BNM bogs, the western stations had their roots in hand-won schemes of the Second World War.⁵⁷⁹ During the war, communities in areas where peat was plentiful had been actively encouraged to extract as much peat as possible due to national coal shortages. Financial grants were distributed through local government to develop infrastructure like roads and pay labour for drainage schemes.

A memorandum from the Department of Industry and Commerce in 1941 outlined the position of the government with regard to this drive for peat production. It stated,

“the intention of Government is that by full use of this widespread and efficient administrative and technical organisation it shall be brought about that no man capable of using a sleán or of otherwise efficiently contributing to the production of peat fuel shall be

⁵⁷⁸ CS Andrews, “Turf - A Myth?” *Administration* 1 (1953): 39.

⁵⁷⁹ The county scheme formed part of the hand-won schemes outlined in Chapter Two.

left unemployed and that by two full harvests of turf this year the maximum contribution shall be made to our fuel necessities.”⁵⁸⁰

This statement emphasised the war-time necessities of providing employment relief, building the reserve of fuel supplies, and the role of national, and particularly, local authorities in administering and facilitating this work. In a report from D. C. Lawlor, then secretary and accountant for the TDB, to the Department of Industry and Commerce in 1941, he specifically outlined the necessity of collaboration between the Turf Development Board, the Department of Industry and Commerce, the Office of Public Works, the Land Commission, Parish Councils, County Councils, the Department of Local Government, and the Department of Agriculture in the organisation of these schemes.⁵⁸¹

Part of the success of these county schemes was the increased production of peat in rural areas. Speaking of his experience as a County Surveyor with responsibility for the scheme in Meath, E. J. Duffy wrote that the “complete control of the bog workings was largely instrumental in producing three times as much turf in the County in 1941 when compared with the previous year.”⁵⁸² Despite increased production, the coordination of so many stakeholders presented challenges, particularly in the area of efficiency. Maintaining a consistent labour force was difficult in the remote regions where the schemes were taking place. Infrastructural development, such as building roads and cutting drains on the bogs, was a further challenge.

D. C. Lawlor argued that the main challenge of the scheme was the inability to standardise organisation and products. He wrote, “the expression ‘turf,’ in our view, cannot reasonably be

⁵⁸⁰ Department of Industry and Commerce “Twenty Thousand Men on the Bogs,” memo dated April 4, 1941, 1–2. NAI TAOIS/S6297.

⁵⁸¹ D. C. Lawlor, memo dated January 17, 1941. NAI TAOIS/S6297.

⁵⁸² E. J. Duffy, “Emergency Fuel: Notes on Turf Production with Special Reference to Co. Meath,” 1942, 101. NAI TAOIS/97/3/340.

defined for the purpose under consideration.”⁵⁸³ He continued, “hand-won turf sold locally is invariably sold not by weight but by creel, box, cart-load or other local measurement. This is one of the major difficulties which mitigate against fixing a price per ton and it is not thought that any price related to the weight of turf would be practicable.”⁵⁸⁴ The inconsistencies in the county scheme reflected the diverse practices and measures of peat applied in the rural harvest system of extraction.

The map shown in figure 3.7 was produced by the Department of Industry and Commerce in 1941 and indicates the quantity of peat extracted in each district in 1939, in red, and the corresponding government grants paid out between 1934 and 1941, in blue. These grants were administered by County Councils to build and repair roads to access remote peatlands.⁵⁸⁵ At the national scale, INDC used the map to divide the country into peat- and non-peat- producing regions. Significant quantities of peat were extracted in the midlands and the west of Ireland. The map was further nuanced by the indication of county boundaries and rural districts, indicating the levels of governance required in the gathering of such information. Figure 3.8 shows this at the county level, in a section from County Kerry. And, while it was an object that primarily detailed the development of a decidedly *national* resource, overlaid as it was on a 1904 Ordnance Survey Map, it still indicated King’s County and Queen’s County instead of counties Offaly and Laois. These markers of colonial administration persisted in Irish state bureaucracy.

⁵⁸³ Lawlor, memo, 9.

⁵⁸⁴ Lawlor, 9.

⁵⁸⁵ OSI, *Production of Turf and Peat Development Grants* (Department of Industry and Commerce, 1941). NAI INDC/EMR/6/3

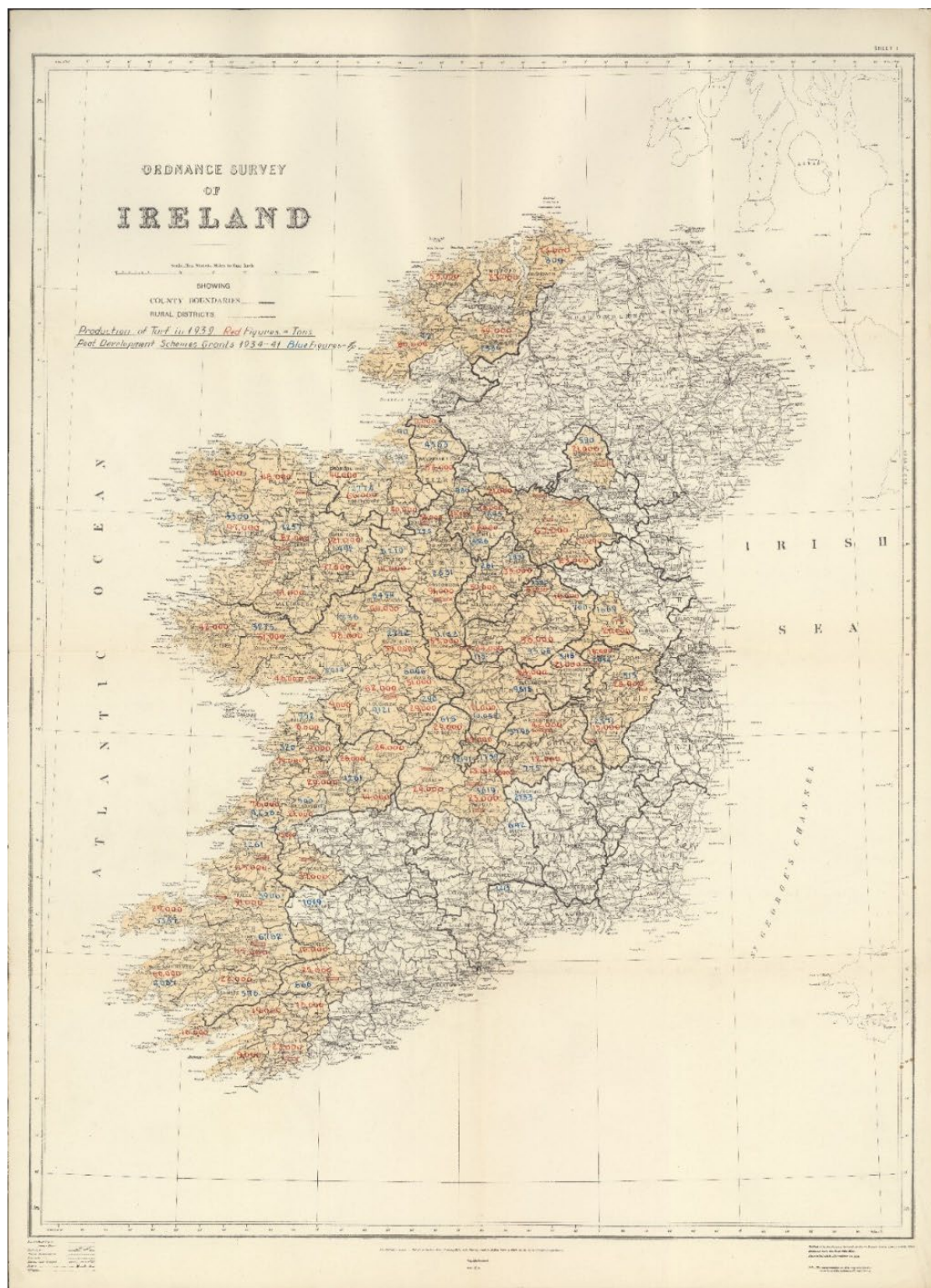


Figure 3.7 Industry and Commerce map of turf producing areas indicating quantities of turf and quantities of grants administered, in Production of Turf and Peat Development Grants (1941).

Considering Lawlor's remarks about the impossibility of standardisation of units of peat, it is challenging to verify the accuracy of the figures shown in the map. The map does, however, give some indication of the scale of the quantity of peat being produced by hand-cutting in the western counties with the aid of government interventions. Following the war, the midlands region was primarily targeted by BNM as sites of industrial development. Following the collapse of the wartime market, the demand for peat from Western counties experienced a sharp decline. Driven by a desire to service the economic and social needs of Western communities and to preserve the production of hand-won turf in areas which had been reasonably enriched with infrastructural investment, the idea of strategically located peat-burning power stations in these communities began to take root within government and institutional debate.



Figure 3.8 Detail of County Kerry, in Production of Turf and Peat Development Grants (1941).

Rural development in the west had been an historical challenge for policymakers in Ireland. In the post-war era, the government attempted to address this in the 1952 Undeveloped Areas Act.⁵⁸⁶ This was designed “to aid industrial development in undeveloped areas.”⁵⁸⁷ Echoing colonial legislation of the late nineteenth century, the Bill defined a region of *congested areas*, primarily along the western seaboard of Ireland and including Donegal, Sligo, Leitrim, Roscommon, Mayo, Galway and Kerry. The Bill further legislated for the establishment of An Foras Tionscal, a state agency which granted financial aid to actors from within the so-called congested areas for the development of industries.

In debates surrounding the passage of the Bill, then Minister for Industry and Commerce Seán Lemass outlined the goals of the Bill for the areas “west of the Shannon.”⁵⁸⁸ He stated, “there is a greater need for industrial development in these counties on the western seaboard than in midland and eastern counties.”⁵⁸⁹ He constructed an image of the west as a region that was almost devoid of industry and subject to the largest waves of emigration in the country. This emigration had only increased after the war.

Part of Lemass’s argument in these debates was framed by the geographical conditions in the west of Ireland. He stated that, “there are, however, particularly in the more remote western parts of the country, areas of bog in which for various reasons large-scale mechanised production by Bord na Móna is impracticable but in which considerable quantities of hand-won turf surplus to

Undeveloped Areas Act, 1952.

<https://www.irishstatutebook.ie/eli/1952/act/1/enacted/en/html?q=undeveloped>

⁵⁸⁷ Undeveloped Areas Act, 1952.

⁵⁸⁸ Seán Lemass speaking in Houses of the Oireachtas, “Committee on Finance. - Undeveloped Areas Bill, 1951—Second Stage. – Dáil Éireann (14th Dáil),” text, December 4, 1951, Ireland.

<https://www.oireachtas.ie/en/debates/debate/dail/1951-12-04/64>

⁵⁸⁹ Ibid.

local needs could be produced if the producers were assured of a permanent market.”⁵⁹⁰ He was also quite explicit on the challenges of the selectiveness of the Bill to provide relief for specific regions. Despite the recognition that other regions beyond the west could also benefit from this investment, he argued that the historical legacies of underdevelopment meant that this region was most in need. He stated that it had been his desire “to avoid establishing something akin to another Border in the country.”⁵⁹¹

The debates surrounding the Undeveloped Areas Act further highlighted how the west of Ireland was conflated with the Gaeltacht in political discourse at the time.⁵⁹² Anxieties and tensions about the ways that industrialisation threatened Irish language and culture emerged. Representing Roscommon, TD John McQuillan argued,

“while Fianna Fáil were in power from 1932 to 1948—I say this without fear of contradiction—no attempt was made to develop industries in the West of Ireland, the idea being that if industrialisation took place there damage would be done to the Irish language and we would lose the way of life existing in the Gaeltacht areas. I do not believe for a moment that if industrialisation takes place in what are known as the Gaeltacht areas the Irish language will suffer. If draining is carried out in the Gaeltacht areas or if the people receive work in factories with decent wages, instead of turning them to the English language it will entice those in the areas who speak English to take up the Gaelic language.”⁵⁹³

⁵⁹⁰ Department of Industry and Commerce, “Establishment of Small Generating Stations for the Use of Hand-Won Turf,” memo dated January 28, 1953), 1. NAI TSCH/3/S8597/B/1

⁵⁹¹ Seán Lemass speaking in Houses of the Oireachtas, “Committee on Finance. - Undeveloped Areas Bill, 1951—Second Stage. – Dáil Éireann (14th Dáil),” text, December 4, 1951, Ireland. <https://www.oireachtas.ie/en/debates/debate/dail/1951-12-04/64>

⁵⁹² Gaeltacht areas were and are predominantly Irish language speaking areas.

⁵⁹³ John McQuillan speaking in Houses of the Oireachtas, “Committee on Finance. - Undeveloped Areas Bill, 1951—Second Stage. – Dáil Éireann (14th Dáil),” text, December 4, 1951, Ireland. <https://www.oireachtas.ie/en/debates/debate/dail/1951-12-04/64>

McQuillan's statement stands at odds with the decades of assertions by the Fianna Fáil administration that rural development was a priority. Or, perhaps more accurately, he was describing the reality that the desire for the preservation of a perceived rural Irish culture in the west limited the implementation of meaningful and targeted industrial policies.

In Manning and McDowell's history of the ESB, the authors show that the western stations were conceptually at odds with the development of the midlands stations.⁵⁹⁴ The prioritisation of social goals over economic ones, and the symbolic function of the western power stations as indicators of the state's commitment to rural development were important features of the discourse surrounding their establishment. Because of this social function, the ESB expressed significant concerns over the establishment of the power stations, indicating that they would be inefficient and uneconomic. Despite these reservations, in 1957, four small power stations in the west of Ireland joined the national grid.⁵⁹⁵ These were Caherciveen in County Kerry, Gweedore in County Donegal, Miltown Malbay in County Clare, and Screebe in County Galway.

The stations were intended to provide a market for surplus hand-won peat in the areas proximate to the power stations. And, while the technology of the stations was based on the equipment used in Portarlinton and Allenwood, it was on a significantly smaller scale. The stations had a 5MW capacity and were designed to operate with 30,000 tons of hand-won peat per year.⁵⁹⁶ The infrastructural developments which efficiently linked the BNM works to the midlands power stations were also absent in the west. Therefore, a complex system of organisation that merged old and new technologies of extraction and power generation developed around these schemes. As part of the establishment of the stations, the ESB were obliged to pay a price for peat from producers that was based on the local market price. This led to conflict as the ESB, who were familiar with managing rates of pay with BNM through a system of weight per ton, set a price per

⁵⁹⁴ Manning and McDowell, *Electricity Supply in Ireland*, 114–117.

⁵⁹⁵ Manning and McDowell, 119.

⁵⁹⁶ Manning and McDowell, 119.

weight. In Caherciveen at least, the standard price of peat was based on volume, in the form of lorry-loads or clamps.⁵⁹⁷

Considering the stations were in service to a large number of peat producers, the managers of the stations faced a significant challenge in guaranteeing a standard product from suppliers. Taking the station at Caherciveen in County Kerry as an example, while it was outlined by the ESB that the sods of peat delivered should be of 30 per cent moisture content, there was no system for testing this save a visual inspection done by an official from the station and a weighbridge for lorry arrivals at the station.⁵⁹⁸ The person tasked with the initial inspection had to physically travel to the sites of extraction, turbary bogs, and inspect clamps of peat there before they were delivered to the station, as there were no storage facilities for surplus peat built at the stations.⁵⁹⁹

The challenge of this task was outlined in a 1963 article in the *ESB Journal* about the power station in Gweedore in Donegal.⁶⁰⁰ Describing the work, it said,

“part of Eddie’s [peat inspector] job is to go around and inspect the clamps of turf on the bogs supplying the station, to ensure that it is dry enough before it is brought to the station by lorry. If the turf arriving at the station is too wet, it has to be rejected, as it won’t burn efficiently in the furnaces. I witnessed the rejection of one lorry-load of turf – a rare occurrence nowadays – when it was found to be a mixture of good turf and soggy stuff thrown in to make weight – the supplies being brought by the ton on the station weighbridge [sic].”⁶⁰¹

The limited infrastructural development in these areas had material consequences for production. The system of peat extraction was, of course, seasonal. All of the producers in the area

⁵⁹⁷ “South Kerry Turf Producers Are Dissatisfied,” *Kerryman*, November 23, 1957: 9.

⁵⁹⁸ “Delivery of Turf to New Kerry Station: E.S.B. Requirements Outlined,” *Evening Echo*, February 21, 1957: 2.

⁵⁹⁹ *Ibid.*, 2.

⁶⁰⁰ James J. McAuley, “Gweedore,” *ESB Journal*, 1963.

⁶⁰¹ McAuley, 5-6.

therefore were clamping their years' harvest at the same time at the end of the summer or early autumn. The lack of on-site storage for deliveries of peat meant that a complex system of scheduled deliveries had to be developed.⁶⁰² This schedule meant that some producers would have to leave their peat stock clamped at the roadside of their turbary for prolonged periods of time. This fuel was often spoiled by rain and wind before it could be delivered.⁶⁰³

There was also significant diversity amongst the various suppliers' capacity. The acceptable quantity of peat for the station had to be adjusted to cater to this variation. An article in the *Kerryman* from 1959 illuminated this conflict. In a meeting of South Kerry peat producers, "it was further decided to ask the ESB to cater for horse-loads of turf at the station during slack periods of farm work in winter time. The proposer said that many small producers in the vicinity of the station found it uneconomic to hire lorries."⁶⁰⁴ This system of ad hoc and responsive measures to local conditions stands at odds with the efficiency of the midlands stations. In the absence of well-developed infrastructure and supply networks, the western stations had to cater for diverse quantities and qualities of peat.

The role that technology played in the western stations was vastly different to the midlands experience. From the beginning, the framing of the stations as being for the sole purpose of burning hand-won peat created a barrier to the labour-saving effects of mechanisation that by the mid-1950s were being experienced on BNM bogs. The costs of peat-cutting machinery were prohibitive for individual producers. Despite this, machines slowly started to appear on western bogs with two machines in operation in Caherciveen by 1962.⁶⁰⁵ This was met with some resistance both from local producers and government officials. An article in the *Evening Echo* in

⁶⁰² "Delivery of Turf to New Kerry Station: E.S.B. Requirements Outlined," *Evening Echo*, February 21, 1957: 2.

⁶⁰³ "South Kerry Turf Producers Ask for Ricking Space," *Kerryman*, July 4, 1959: 16.

⁶⁰⁴ Ibid.

⁶⁰⁵ Iveragh Co-operative Ltd. Miscellaneous. NAI 2002 67 312

1962 warned, “machinery has now been introduced in the district for the cutting of turf but the station was never erected for machine-won turf. Such machines were a danger to the 286 suppliers to the station and their families.”⁶⁰⁶

Machinery was introduced to western bogs through the work of co-operatives of peat producers. These organisations pooled resources and applied for government grants for the purchase of machinery. The machines were usually former BNM baggers that were no longer in use. The Iveragh Co-operative in 1967 applied to the Department of Transport and Power for a peat-cutting machine or the funding to purchase a machine. Erskine Childers, then Minister for Transport and Power, responded to this request,

“in arranging for the erection of the generating station at Caherciveen and in making funds available for necessary road improvements, the Government have gone as far as might reasonably be expected in providing an outlet for surplus turf produced in the Caherciveen area. He would again like to express the hope that the local producers will show the necessary initiative and enterprise to take full advantage of the annual market for 30,000 tons of turf which the station provides.”⁶⁰⁷

Childers’ response demonstrates the limits of the state’s commitment to development in the west of Ireland at this time. Beyond the establishment of the power stations, any further resources had to be accumulated by communities themselves.

Innovation and collaboration were required to fill in the organisational and infrastructural gaps in investment. An issue of the *ESB Journal* from 1964 described the ways that the community in Caherciveen was taking initiative to try to alleviate some of the challenges they faced.⁶⁰⁸ In the springtime, when the peat needed to be cut, other farm work often took precedence. In order to alleviate the “Spring labour ‘bottleneck’” the turf co-operative had invested in two former BNM

⁶⁰⁶ “Turf Supplies to E.S.B. Station,” *Evening Echo*, February 26, 1962: 4.

⁶⁰⁷ “Minister Asked to Supply Turf Cutting Machine in Caherciveen,” *Kerryman*, October 7, 1967: 15.

⁶⁰⁸ Anon, “Caherciveen - Tuesday,” *ESB Journal*, 1964, 9.

baggers and a local manufacturer began developing a tool which could be attached to ordinary tractors to fulfil the same function as the baggers.⁶⁰⁹

Mobilisation of a large number of interest groups and organisations at the local level were essential for the operation of the system of supply to the western stations. These included the co-operative societies, development associations, county councils, politicians, local branches of Muintir na Tire, and clergy members.⁶¹⁰ This community-level mobilisation generated long-lasting associations between peat cutting cooperatives and local politics.⁶¹¹

Besides the clear technological disadvantage of the western stations, ideas and beliefs about the landscape further impacted the kinds of development that happened there. In debates surrounding the Undeveloped Areas Bill, John McQuillan highlighted the kinds of tropes that had been perpetuated about the West, with communities imagined to be consisting of “wild mountainy men.”⁶¹² This wildness in relation to people was considered a disadvantage. But the association of wildness with the non-human environment in the west of Ireland was embedded in a longer historical narrative about natural beauty.

Since the 1930s, imagery of the west had dominated national cultural and tourism materials for the promotion of Ireland. The rugged landscape functioned as a means through which to showcase the *natural unspoilt* beauty that still existed in Ireland, despite the industrialisation and

⁶⁰⁹ Ibid, 9.

⁶¹⁰ The significance of these groups and actors is visible in the following newspaper sources: “Iveragh Warmly Welcomes Turf-Fired Generating Station Project,” *Kerryman*, July 25, 1953: 7; “Turf Men’s Co-Op May Save Deelis,” *Kerryman*, November 15, 1969, 22; “£19,250 for Roads Leading to Generating Station at Deelis Bridge,” *Kerryman*, February 12, 1955: 5; “Co. Kerry Guild and Generating Station,” *Evening Echo*, December 22, 1954: 3.

⁶¹¹ Connaughton, “Multi-Level Governance and Policy Contestation.”

⁶¹² John McQuillan speaking in Houses of the Oireachtas, “Committee on Finance. - Undeveloped Areas Bill, 1951—Second Stage. – Dáil Éireann (14th Dáil),” text, December 4, 1951, Ireland.

<https://www.oireachtas.ie/en/debates/debate/dail/1951-12-04/64>

urbanisation that was increasingly causing concern in the post-war era.⁶¹³ Historian of the Irish tourism industry, Irene Furlong argues that the reproduction of images of the west of Ireland as a rural idyll contributed not only to international perceptions of the west of Ireland but also a national sense of “environmental heritage.”⁶¹⁴

Within this wider discourse, the station at Gweedore was described as being “in one of the most spectacularly beautiful sites that anyone could have picked for such a project, on the shores of a lake at the foot of towering Errigal, and ringed by scenery that carries the eye to heaven.”⁶¹⁵ For both Gweedore and Caherciveen, terms like “unspoilt,” “remote,” and “devastatingly beautiful,” were used to describe the setting of the power stations.⁶¹⁶ In the *ESB Journal* article about Caherciveen, attention was drawn to the number of staff who worked there that were originally from Dublin. The article describes how the scenery was part of the reason these workers were satisfied to live in such a remote location. The author wrote, “the scenery in Kerry is ‘it.’ [. . .] there are hundreds of beautiful spots to be found, many of them never seen by the tourists. You could spend a lifetime touring the county and find something new to see every time.”⁶¹⁷ Much was made in these accounts of the proficiency of the workers in the Irish language, and the re-learning of Irish by migrant staff.⁶¹⁸

While part of the discourse surrounding the stations was informed by economic and industrial poverty, the natural beauty of these areas meant that the power stations were also embedded in an active tourist industry. The manager of the station in Caherciveen explained, “we have a special incentive to keep the station looking well, [. . .] in the tourist season we get quite a few people

⁶¹³ Irene Furlong, “Through a Mirror, Darkly - Irish Tourism and the Construction of National Identity 1922-1960,” *International Journal of Regional & Local Studies* 5, no. 2 (2009), 65.

⁶¹⁴ Furlong, “Through a Mirror, Darkly,” 65.

⁶¹⁵ James J. McAuley, “Gweedore,” *ESB Journal*, 1963, 3.

⁶¹⁶ McAuley, 3; 5; 8; and Anon, 8.

⁶¹⁷ Anon, “Caherciveen,” 9.

⁶¹⁸ McAuley, “Gweedore,” 7.

calling to look over the station, which has become one of the ‘sights’ on the Ring of Kerry. Last year we had about 300 visitors – often in coach-loads – who stopped off to tour the Station.”⁶¹⁹ The western stations, in contrast to the midlands stations, became embedded within natural landscapes of beauty rather than producing a new, industrial image of the west.

Part of the persistence of the western imaginary was related to the low level of infrastructural development. But, alongside the construction of the power stations themselves, the transmission network facilitated the extension of the rural electrification for consumers in these areas.⁶²⁰ In historian Michael Shiel work on the RES, he argues that the impact of electrification, in conjunction with other policy initiatives, saw the establishment of a decent industrial economy in the west of Ireland.⁶²¹ Access to electricity alongside financial and administrative investments through the Industrial Development Authority, An Foras Tionscail, and Gaeltarra Eireann made a significant impact on the ability of small industries and businesses to establish and develop. Shiel specifically outlines the case of Gweedore, where electricity was made available in 1954, and the power station built in 1957. In the wake of these developments, a large industrial complex was built for the manufacture of goods.⁶²² According to Shiel, similar developments also occurred in Galway, Mayo, Kerry, Donegal, and less significantly in Clare.⁶²³ This kind of industrial development was frequently excluded from tourism or cultural narratives about the west of Ireland.

The overall impacts of the power stations to the local agrarian economies were not negligible. This was clearly expressed in an *ESB News* article about Caherciveen with the author explaining, “a certain amount has been achieved [. . .] in raising the incomes of small farmers in

⁶¹⁹ Anon, “Caherciveen,” 10.

⁶²⁰ “E.S.B. Activities in Iveragh,” *Kerry Champion*, May 7, 1955: 6.

⁶²¹ Shiel, *The Quiet Revolution*, 229–236.

⁶²² Shiel, 230–232.

⁶²³ Shiel, 230–232.

the area.”⁶²⁴ The stations fulfilled part of the social objectives of the state, although this was largely facilitated by local community mobilisation. Nonetheless, the local economic impacts were described positively. In Gweedore, for example,

“[...] for about 1200 families the station means that the heartbreaking tradition of emigration from the area has virtually ceased. Each year, about 34,000 tons of turf are bought, at £2 10s. 0d. per ton. With the other salaries and wages, etc., from the station, this amounts to almost £100,000 per annum in circulation, where before most people were relying on seasonal emigration to the potato jobs in Scotland to supplement their income from the tardy acres of arable land.”⁶²⁵

The overall contribution of the stations to the national grid was minimal, as they consistently failed to meet their production targets due to insufficient deliveries of peat.⁶²⁶ The minimal production of these stations meant that from a supply perspective, the midlands station, along with hydropower, oil, and coal plants, were more nationally significant.

V. Closures

These parallel histories of peat use for electricity generation demonstrate that, in practice, rural development had different meanings for different regions of Ireland. This differential development in different regions is perhaps most visible in the discourse surrounding the closures of the stations in the late twentieth century.

Portarlinton power station closed in 1988, due in part to the impending exhaustion of the bogs supplying it, as well as the introduction of higher output power stations like Tarbert and Moneypoint. Screebe was the first of the western stations to close, in 1989. Caherciveen was the

⁶²⁴ Anon, “Caherciveen,” 8.

⁶²⁵ McAuley, “Gweedore,” 6.

⁶²⁶ McAuley, 3.

final to close in 2003. Economic and technological inefficiencies contributed to their closures, as well as the material realities of the finiteness of peat bogs. In media surrounding these closures, it is possible to identify the persistence of the cultural and ideological meanings associated with the stations.

The persistence of the western imaginary despite steadily increasing industrialisation in the west, was evident in a 1985 news report by RTÉ, the national broadcaster of Ireland. This report brought attention to the threat of closure of the small peat-burning power station at Screebe in Connemara, in County Galway. Speaking to RTÉ in the report, local parish priest Father Leo Morahan encapsulated the value of these stations in the context of their potential closure. He claimed,

“this is the message I’d like to give to any politician, especially any national politician, who is watching this program, that it’s time their bluff was called with regard to preserving Gaelic civilisation and Gaelic culture. Culture depends on people, if you don’t have people you won’t have culture. If you haven’t people in this area, you’ve a museum nothing else! But people won’t be here unless they’ve got some kind of decent livelihood with dignity. And now, it comes to this, that if the present government or any other government are intent on subscribing to what every government has said since we started this state that they were committed to Irish language and culture, if they want to do that let them keep this power station open.”⁶²⁷

Morahan’s statement reflected the continued entanglements of the western power stations with ideas of rural development, social versus economic objectives, and the ways in which these stations had to carry not only the weight of providing a market for rural communities but also to symbolise the preservation of rural values and traditions. The broadcast featured several images that captured these entanglements. It showed the station embedded as it was in the Connemara countryside, Father Morahan speaking in front of the power station, a local development officer situated in front of a thatched cottage, and multiple images of a man cutting peat by hand. These

⁶²⁷ “Save Screebe Power Station,” *RTÉ News* (RTÉ, April 25, 1985). RTÉ archives, <https://www.rte.ie/archives/category/environment/2020/0323/1124827-esb-screebe-power-station/>

are shown in figures 3.9–3.12. The report packaged some of the original ideals and objectives of the western power stations into their key constituents. The transplantation of modern infrastructure and technologies into sites of beauty and wildness, the needs and wants of communities being represented by priests or local policy makers, and images of an imagined rural Irish idyll, organised around the thatched cottage and the sleán. When the station closed in 1989, resistance from local peat-cutters highlighted the continuing importance of the station to the local economy.⁶²⁸



Figure 3.9 Screebe power station, in “Save Screebe Power Station,” RTÉ News (1985).



Figure 3.10 Fr. Morahan in front of Screebe power station, in “Save Screebe Power Station,” (1985).

⁶²⁸ “ESB to Close Screeb [sic] Station,” *RTÉ News* (RTÉ, January 19, 1989). RTÉ archives, <https://www.rte.ie/archives/collections/news/21303206-esb-to-close-screeb-peat-station/>



Figure 3.11 Local development officer, Charles Lynch, in “Save Screebe Power Station,” RTÉ News (1985).



Figure 3.12 Hand-winning peat, in “Save Screebe Power Station,” RTÉ News (1985).

In contrast to the provincial depictions of the western stations, the decommissioning and demolition of the midlands stations was framed in more nationally significant terms. Local historian Richard Mullins, in his monograph about Portarlinton, described the closure as such, “for 38 years its energy had whirled the turbines to generate much needed electrical energy for the benefit of our country, and many people are glad to have played even a very small part in that

historic achievement.”⁶²⁹ The demolition of the power station in 1997 mirrored the spectacle with which it had been opened, albeit with a markedly different tone.⁶³⁰ Onlookers came from around the region and the country. In an *Irish Times* report from the demolition, it was described as evoking a funeral, or “a death in the family.”⁶³¹ Describing the controlled explosion, journalist Frank McDonald wrote, “the structure, taller than Dublin’s Liberty Hall, had looked so solid minutes earlier. In fact, it was so thin and insubstantial that there was almost nothing left.”⁶³² This demolition is shown in figure 3.14.

At their inception, and through the first decades of their existence, the midlands stations remade the midlands region as a site of national and international technological modernity. But, due to rapidly increasing utilisation of oil and coal for the generation of electricity, and the rapidly decreasing stocks of peat fuel, by the 1990s they were obsolete and, as Mullins describes, “silent sentinel[s] to a courageous age.”⁶³³

⁶²⁹ Mullins, *A History of Portarlinton Generating Station*, 65.

⁶³⁰ Frank McDonald, “Tower of Power Hits the Turf,” *The Irish Times*, April 4, 1997.

⁶³¹ McDonald.

⁶³² McDonald.

⁶³³ Mullins, *A History of Portarlinton Generating Station*, epigraph.



Figure 3.13 "Quick as a flash," in *Electric Mail* (1997), 5.

Chapter Four

“Where’s the Fire?”

Peat in the Irish Home – Meaning and Materiality

I. Introduction

“Liquids and fire were the essential elements of my childhood. Most immediately the open kitchen fire, as central to life as the sun itself. All the activity of the house began there, from the rekindling in the morning with small dry sods of turf placed on the still-burning embers covered up with ash the night before. Everything and everyone gravitated to the fire – clothes were dried beside it, boots were set on the hob (a ledge running along the wall above and behind it), a truckle or bed was positioned beside it, and last thing at night, before covering the embers again and retiring to bed, was a serving of stirabout with milk, a kind of thick porridge boiled in a pot hung on the crane with pot-hooks, eaten warm at night, and cold in the morning.”⁶³⁴

Reminiscing on his childhood experiences in the rural home of his grandparents in County Meath in the 1950s, Irish poet Macdara Woods describes the fundamental necessity of the element of fire to all aspects of domestic life. Heat, light, food, sleep: all of these primary needs were met in some way by the careful domestic labour that ensured the fire’s continuous presence. The convergence of all people within the household around the fire also speaks to a crucial social

⁶³⁴ Macdara Woods, “Liturgies of Fire and Water,” in *The Vibrant House: Irish Writing and Domestic Space*, ed. Rhona Richman Kenneally and Lucy McDiarmid (Dublin, Ireland: Four Courts Press, 2017), 73.

function that the fire fulfilled. Conversation, storytelling, and prayers happened on dark nights by the light of the fire's blaze. The open fire, fuelled by peat, was a common feature of rural Irish homes well into the late twentieth century.

This chapter argues that energy consumption in Ireland was inseparably entangled with the sociocultural imaginary of the rural domestic idyll. Changing modes of consumption, due to rural electrification and the development of new technologies for heating and cooking, transformed domestic labour and expectations of domestic life. While peat energy contributed to the electrification of Ireland, its primacy as a solid fuel was challenged by an influx of new modes of consumption in the second half of the twentieth century. Bord na Móna relied on the historical associations with nation and home to ensure the longevity of peat fuel within an evolving domestic energy market. The changing materiality of peat within the home was part of a wider movement aimed at the development of a new modern consumerist domestic imaginary in Ireland.

Scholars of energy history have devoted significant attention to the history of energy transitions from a production and sometimes consumer culture lens.⁶³⁵ But the modalities of these transitions within the domestic sphere are often excluded from their analysis. In her classic text, *More Work for Mother*, historian Ruth Schwartz Cowan initiates a reimagining of the lesser-considered home space in energy history and argues that “in reality kitchens are as much a locus for industrialised work as factories and coalmines.”⁶³⁶ Building on this research, historian Ruth W. Sandwell challenges the absence of women from energy history narratives by writing the history of domestic labour into wider discourses of industrial modernity.⁶³⁷ Women within the home, she argues, were the mediators of energy entering the home. This happened through the consumption of electricity and solid fuel for heating water, preparing food, and managing waste products. The

⁶³⁵ Crosby, *Children of the Sun*; Smil, *Energy and Civilization*; Sieferle, *The Subterranean Forest*.

⁶³⁶ Cowan, *More Work for Mother*, 4.

⁶³⁷ R. W. Sandwell, “Changing the Plot: Including Women in Energy History (and Explaining Why They Were Missing),” in Harrison-Moore and Sandwell, eds. *In a New Light*, 16-45.

kinds of energy sources that were accessible and the modes of their consumption were organising forces within households, providing women both more freedom but also more constraints.

Chapter Two of this thesis discusses the historically dominant position of hand-won peat fuel for rural consumers in Ireland. It further shows that labour and technology interacted to produce industrial peatlands following the Second World War. Alongside this transformation was of course the building of peat power stations. The domestic consumption of peat also underwent significant transformations alongside these large energy developments. The extension of the Rural Electrification Scheme (1946-1975) and the introduction of new electrical and solid fuel appliances shaped social, cultural, and technological modernisation.⁶³⁸ The impacts of this modernisation were increasingly felt in domestic spaces. A new relationship between people in the home and their consumption of energy emerged in the post-war era. This relationship was no less reliant on the overwhelming consumption of peat energy, but increasingly framed domestic energy consumption within narratives about cleanliness, efficiency, and modernity.

Historian Catriona Clear argues that finding sources that represent women's experiences is not challenging.⁶³⁹ She writes, "the problem with sources is not so much uncovering them as trying not to limit oneself to one particular kind of source."⁶⁴⁰ With this in mind, this chapter utilises a broad range of materials to reconstruct national, cultural, institutional, and social experiences and beliefs about housework, domestic energy consumption, and the changing realities of home life in Ireland in the twentieth century. These include folklore materials, biographies, women's magazines and advertising campaigns.

⁶³⁸ Shiel, *The Quiet Revolution*, 7.

⁶³⁹ Caitriona Clear, *Women of the House: Women's Household Work in Ireland, 1926-1961: Discourses, Experiences, Memories*, Women in Irish History Series (Portland, OR: Irish Academic Press, 2000).

⁶⁴⁰ Clear, 10.

This chapter traces the historical origins of national cultural meaning-making around the fire, in particular the sod-peat-fuelled open fire. It then examines the materiality of peat as an historically embedded domestic fuel source which shaped the design and organisation of domestic space and labour. The fire was an organising force for social life, and it acquired a cultural importance in politics and the arts. The chapter then engages with the ways in which preexisting beliefs about peat were both invoked and resisted by government and industry to capture domestic consumers through energetic innovation and cultural messaging. Peat became a commodity in the form of machine turf, briquettes, and electricity in an increasingly complex fossil fuel economy. Competition with other fuel sources saw it presented to consumers as a modern fuel, obscuring the modes of its extraction and the kinds of labour with which it had been associated.

II. The fire and the nation

The fire functioned as a symbol within wider ideas of Irish national identity that had their roots in pre-independence, nationalist meaning-making. Nationalism studies scholar John Hutchinson uses the framework of cultural nationalism to define the “response to the erosion of traditional identities and status orders by the modernization process as mediated through a reforming state.”⁶⁴¹ The revival and resurgence of a perceived indigenous culture in opposition to the oppression of the English language and English customs was as essential to actors within the Home Rule movement in the late nineteenth century in Ireland as political action.⁶⁴² Hutchinson describes cultural nationalism as an inherently elitist movement whose roots emerged in literary and academic circles

⁶⁴¹ John Hutchinson, *The Dynamics of Cultural Nationalism: The Gaelic Revival and the Creation of the Irish Nation State* (London; Boston: Allen & Unwin, 1987), 4.

⁶⁴² Hutchinson, 4.

but the legacy of which had long-reaching implications for the portrayals and perceptions of Irish culture in the post-independent state. The peat fire was a prevalent symbol in this movement.

This is evident in the collective works of the Gaelic League, an organisation that was founded in 1893 to compile and construct an Irish literary tradition that was rich in meaning, history, and the Irish language.⁶⁴³ The League's intellectual mission was to recognize Gaelic culture as its own coherent entity, but also to construct an historically-based Gaelic imaginary that was resistant to industrial modernity and urbanisation. Members of the League therefore relied heavily on folklore, customs, and stories of Irish mythology. These materials featured the open fire, often explicitly a peat fire, as the context for these stories, or as part of the overall world they were trying to represent.

This process of culture-making was already beginning in 1888, when prolific League-leader W. B. Yeats compiled an extensive collection of folk tales based on his conversations with rural Irish people, authors, and Seanchaís.⁶⁴⁴ He called this *Irish Fairy and Folk Tales*.⁶⁴⁵ Yeats intended this work to be a foundational text for the rich tradition of storytelling in Ireland. He presented a collection of this folklore that emphasised the superiority, as Yeats saw it, of the rural, agrarian culture beyond urban spaces in Ireland. He believed that people in these places were more spirituality connected to the world around them, seen and unseen. He outlined the significance of the collection stating,

“these folk-tales are full of simplicity and musical occurrences, for they are the literature of a class for whom every incident in the old rut of birth, love, pain, and death has cropped up

⁶⁴³ Timothy G. McMahon, *Grand Opportunity: The Gaelic Revival and Irish Society, 1893 - 1910*, Irish Studies (Syracuse, NY: Syracuse University Press, 2008), 2.

⁶⁴⁴ A ‘seanchaí’ was a person who told stories and was a repository of oral history and folklore for their community.

⁶⁴⁵ W. B. Yeats, ed., *Fairy and Folk Tales of the Irish Peasantry* (New York: The Walter Scott Publishing Co. Ltd., 1903).

unchanged for centuries: who have steeped everything in the heart: to whom everything is a symbol. They have the spade over which man has leaned from the beginning. The people of the city have the machine, which is prose and parvenu.”⁶⁴⁶

Here Yeats invoked a continuity of a rural culture that was inherently more authentic than the rapidly mechanising urban spaces around him. The stories Yeats presented were themed according to different aspects of Irish superstition and included fairies, ghosts, and witches. Critically, however, the open fire appeared as a central agent in these stories. Examples include a story of the ‘changelings’ wherein it was advised to throw a child onto the fire to determine if there was a phantom fairy living within them. Another story about ‘bewitched butter’ featured “a bright turf fire blaz[ing] on the hearth.”⁶⁴⁷

Another foundational text in the preservation of the Irish folkloric tradition was Douglas Hyde’s 1890 text *Beside the Fire: A Collection of Irish Gaelic Folk Stories*.⁶⁴⁸ It was also compiled through conversations and encounters with ordinary people. From the title it is evident that, for Hyde, the custom of storytelling was inseparable from the open fire. This is also evident in the text. The fire was mentioned often in the book for heating and cooking, suggesting the inseparability of the symbol of the fire from the domestic labour to which it was connected. Yeats and Hyde’s work demonstrate that the consumption of energy was part of what Hutchinson describes as “the myth of origins,” that is, an archetypal Irish culture.⁶⁴⁹

As well as the prominence of folklore in constructions of the Gaelic imaginary, the works of the playwright J. M. Synge were foundational in situating the domestic sphere within wider narratives about the nation. Predominantly set in rural locations, Synge’s plays *Riders to the Sea*

⁶⁴⁶ Yeats, *Fairy and Folk Tales*, xii.

⁶⁴⁷ Yeats, 164.

⁶⁴⁸ Douglas Hyde, ed., *Beside the Fire: A Collection of Irish Gaelic Folk Stories* (London: David Nutt, 1890).

⁶⁴⁹ Hutchinson, *The Dynamics of Cultural Nationalism*, 132.

and *In the Shadow of the Glen*, both published in 1904, specified an open peat fire as part of the set design and both were staged in a typical Irish cottage.⁶⁵⁰ *Riders to the Sea* was set on the Aran Islands in Galway and *In the Shadow of the Glen* in rural Wicklow. The experiences of ordinary people were foregrounded, again adding to a literary canon that was focused on privileging a specific kind of rural Irish culture.

Death, loss, and the harshness of life in these communities and landscapes were key themes in the texts. The comfort of the peat fire was often used as an antidote to these realities. Synge's best-known work *The Playboy of the Western World* (1907), specified "a large open fire-place, with turf fire" in the stage design.⁶⁵¹ Character interactions with the fire throughout the play lent authenticity to the action taking place. The domestic sphere was thus positioned not only as the setting for local and community experiences, but also, as literary scholar Nicholas Grene argues, "by implication, the life of the nation."⁶⁵²

In the cultural imaginary of the essential Irish domestic space, women and their labour were firmly situated within the home. In Synge's plays, female characters were given rich internal lives and strength of character, but they existed almost exclusively within the domestic setting of his plays. This idea was deeply entrenched in the mission of the Gaelic League, with the contributions of women within the movement often being relegated to the home. From this

⁶⁵⁰ J. M. Synge, *In the Shadow of the Glen* (Boston: John W. Luce & Company, 1911); and J. M. Synge, *Riders to the Sea* (Boston: John W. Luce & Company, 1911).

⁶⁵¹ J.M. Synge, *The Playboy of the Western World* (Dublin: Maunsel and Company Ltd., 1907), 1.

⁶⁵² Nicholas Grene, "Inside the House: Synge's Stage Spaces," in *The Vibrant House: Irish Writing and Domestic Space*, ed. Rhona Richman Kenneally and Lucy McDiarmid (Dublin: Four courts press, 2017), 126.

position, they were imagined to have influence over the education of children in the Irish language and history, and in the consumption of Irish goods.⁶⁵³

This is clear in the writing of Mary E. L. Butler, one of only seven women who were elected to a position within the executive organisation of the League. Writing in 1900, she argued,

“they [women] may, therefore, think that in this language war they have no place, but they are mistaken, for it is warfare of a special kind, warfare which can best be waged not by the shrieking viragoes of aggressive amazons, but by the gentle, low-voiced women who teach little children their first prayers, and, seated at the hearth-side, make these around them realise the difference between a home and a dwelling.”⁶⁵⁴

This demonstrates that the fireside not only featured predominantly in the stories that formed the Gaelic imaginary, but it also had a material function as the site of the dissemination of this culture. According to historian Frank Biletz, Butler’s view on women’s role within the movement was overall less conservative than the singular relegation to domestic organisation.⁶⁵⁵ In fact, the home functioned for Butler as a stepping stone for the future participation of women in the public sphere. There was a recognition of the power of the domestic sphere as an arena for the dissemination of Irish culture and language, and this was an essential part of the independence movement.⁶⁵⁶

Irish domestic space, as represented by the peat fire, was imbued with political and cultural significance in the late nineteenth and early twentieth century. This national significance persisted

⁶⁵³ Frank A. Biletz, “Women and Irish-Ireland: The Domestic Nationalism of Mary Butler,” *New Hibernia Review*, Spring, 6, no. 1 (2002): 59–72.

⁶⁵⁴ Mary E. L. Butler, “Irishwomen and the Home Language,” *All Ireland Review* 1, no. 50 (1900), 6.

⁶⁵⁵ Biletz, “Women and Irish-Ireland, 59–72.

⁶⁵⁶ Biletz, 72.

in the years following independence, although it was mediated through changing economic, political, and social conditions. National development was often at odds with the constructed national imaginary and this created tension in other aspects of state building.⁶⁵⁷ As previous chapters demonstrate, this included industrial development and energy provision.

The influence of the Gaelic League was visible in the Free State political administration as a kind of resistance to modernising forces at play in Irish domestic life. Following the accession of the Fianna Fáil government in 1932, the political ambitions of the party, in the context of a global depression, were towards a protectionist, isolationist agenda and the prioritisation of Irish agriculture and industry. But the administration was also determined to, as Hutchinson describes, “institutionalise its values in the nation.”⁶⁵⁸

This materialised in a number of distinct ways. Historian Mary Daly identifies a broad movement in the 1930s towards the production of materials that depicted Irish life as rural, poor, agrarian, and based in the west.⁶⁵⁹ These included the publication of the *Island biographies* (1929–1936), the establishment of the National Folklore Collection in 1935, and the Harvard Study and subsequent publication of *Family and Community in Ireland* in 1940. The depictions of the ordinary lives of Irish people contained in these works was important at the time as part of the wider political movement concerned with the preservation of an Irish domestic imaginary that could represent the values of the nation.

A series of biographical texts written in the Irish language about the inhabitants of the Great Blasket Island in County Kerry were produced and popularised during this period. These works gave an account of the lives and customs of communities there, beginning with the publication of

⁶⁵⁷ Eoin Devereux, “Saving Rural Ireland-Muintir Na Tire and Its Anti-Urbanism, 1931-1958,” *The Canadian Journal of Irish Studies* 17, no. 2 (1991): 23–30.

⁶⁵⁸ Hutchinson, *The Dynamics of Cultural Nationalism*, 321.

⁶⁵⁹ Mary E. Daly, “‘The State Papers of a Forgotten and Neglected People’; the National Folklore Collection and the Writing of Irish History,” *Béaloidéas* 78 (2010), 63.

An tOileánach, or *The Islandman*, by Tomás Ó Crohan in 1929.⁶⁶⁰ This was followed by *Fiche Bliain ag Fás* by Muiris Ó Súilleabháin in 1933, and *Peig* by Peig Sayers in 1936.⁶⁶¹ These books were the product of scholarly interest in the region and a desire to preserve, in the Irish language, the customs and traditions of a way of life that appeared to be under threat from modern development. The books each detailed the lives of the authors and their position within their community as seanchaís. The minutiae of daily life were recorded in the texts, including the activities of the domestic sphere and the labour of maintaining the peat fire. Figure 4.1 shows Peig Sayers by the hearth in her home on An Bhlascaid Mhór.⁶⁶² The books themselves emphasised the hardships of daily life and survival in the west of Ireland and were imbued with a kind of cultural morality that leaned on Catholic sensibilities and the integrity of having a life of toil and hard labour.

⁶⁶⁰ Tomás Ó Crohan, *The Islandman*, trans. Robin Flower (Oxford, United Kingdom: Clarendon Press, 1951).

⁶⁶¹ Muiris Ó Súilleabháin, *Twenty Years A Growing*, trans. Moya Llwelyn Davies and George Thomson (Middlesex, England: Penguin Books, 1938); Peig Sayers et al., *Peig: The Autobiography of Peig Sayers of the Great Blasket Island*, Reprint (Dublin: Talbot Press, 1983).

⁶⁶² Translates to 'the Great Blasket island.'



Figure 4.1 Caoimhín Ó Danachair, 'Peig Sayers at her own fireplace', 1946. NFC.

The National Folklore Collection and Arensberg and Kimball's anthropological study have been discussed at some length in Chapter Two. Their value as source material here is related specifically to the ways in which these collections engaged with the domestic sphere, and the labour and customs associated with the peat fire in Ireland at the time. In the National Folklore Collection, this included the recording of fire lore, symbolism related to the fire, the labour of the fire, and the kinds of fuel that were used, with specific reference to peat.⁶⁶³ In *Family and Community in Ireland*, the authors' representations of domestic life centred around the presentation of the typical family dwelling, which was fuelled by an open peat fire.⁶⁶⁴ They devoted significant attention to the labour of tending and maintaining the fire. The influence of the Fianna Fáil government on this text has been addressed previously. However, it is important to reiterate again

⁶⁶³ Seán Ó Súilleabháin, *A Handbook of Irish Folklore* (Dublin: The Educational Company of Ireland Ltd., 1942): 78-82.

⁶⁶⁴ Arensberg and Kimball, *Family and Community in Ireland*.

the ways in which the priorities of the state with regard to family life were reflected in the final text. Éamon de Valera's concerns with the sexual content of the chapter related to family life saw an entire chapter of the book withdrawn.⁶⁶⁵ The text functioned as an extension of the nation-building project of de Valera's government at the time. The rural idyll was preserved, while any content that was at odds with this image was censored.

Efforts by the nascent Irish tourist industry further embedded the image of the peat fire in representations of the nation.⁶⁶⁶ Images of the Irish rural idyll were being reproduced in the 1930s in tourist films like Robert Flaherty's *Man of Aran* and Irish pavilions at international fairs.⁶⁶⁷ Photography was also used as a medium through which to foreground images of the domestic sphere as evidenced in the Fáilte Ireland Tourism Photographic Collection.⁶⁶⁸ Within this visual culture, the peat fire appeared often as the focal point for family life within Irish domestic spaces. This is evident in figure 4.2 which shows a family gathered around a fire in 1948.

⁶⁶⁵ Anne Byrne and Eoin O'Sullivan, "Arensberg, Kimball and de Valera: A Story of Sex and Censorship," *Irish Journal of Sociology* 27, no. 3 (2019): 227–50.

⁶⁶⁶ Irene Furlong, "Through a Mirror, Darkly - Irish Tourism and the Construction of National Identity 1922-1960," *International Journal of Regional & Local Studies* 5, no. 2 (2009), 65.

⁶⁶⁷ Furlong, 52-55.

⁶⁶⁸ *Fáilte Ireland Tourism Photographic Collection*, Digital Repository of Ireland, December 12, 2020. <https://repository.dri.ie/catalog/pk02rr951>



Figure 4.2 'Interior, John Davis Cottage,' Fáilte Ireland Tourism Photographic Collection, 1948.

Critiques of the elitism of the attempted revival of the Irish language, Irish Catholic morality, and the reification of rural Irish life formed the basis of many literary works in the mid-twentieth century. Resistance to the domestic imaginary inspired art that subverted the tropes of Irish cultural nationalism either satirically or to add complexity and nuance to realist impressions of the experiences of ordinary people. For example, Irish writer Flann O'Brien, in his 1941 text *An Béal Bocht*, satirically employed the island biography form.⁶⁶⁹ He used this as a means to highlight the harmful effects of the construction of national identity in the form of Gaelic biographies. O'Brien wrote the book in Irish intentionally to highlight how limited fluency in the language reflected the limits of the state's attempts to revive it. He highlighted how works like *Peig* and *An tOileánach* had failed to reach a wide audience until their translation into English.⁶⁷⁰

⁶⁶⁹ Flann O'Brien, *The Poor Mouth: A Bad Story about the Hard Life*, 1st Dalkey Archive ed (Normal, Ill: Dalkey Archive Press, 1996).

⁶⁷⁰ Ciaran Ross, "Blasket Island Autobiographies: The Myth and Mystique of the Untranslated and Untranslatable," *Translation and Literature* 12, no. 1 (2003): 114–43.

In the novel, O'Brien depicts a life of misery, hardship, and despair in the west of Ireland. He reproduced the imagery of the island biographies as a means of challenging the romanticism of these works and the "othering" that actively occurred through their production. He further used humour and exaggerated scenes to bring attention to the often-bleak realities of the romanticised hearth. In a scene from the protagonist's childhood, he wrote,

"[my mother] took a bucket full of muck, mud and ashes and hen's droppings from the roadside and spread it around the hearth gladly in front of me. When everything was arranged, I moved over near the fire and for five hours I became a child in the ashes – a raw youngster rising up according to old Gaelic tradition."⁶⁷¹

O'Brien used of the object of the fire, within the context of the domestic sphere, as a means through which to critique Irish social and political life.

This framing also featured in the works of playwright John B. Keane. Keane adopted the imagery of the rural idyll in order to present uncomfortable truths within a framework that felt familiar. His 1959 play *Sive* was a harsh critique of Catholic morality and social norms in Ireland.⁶⁷² The play takes place within the familiar setting of a rural Irish kitchen with the open hearth central to the stage design. The main character, Sive, is a young girl betrothed to an old man through a matchmaker with the promise of wealth for her stepparents. Themes of legitimacy, greed, religion, and gender all underpin the text. The character of Sive's grandmother provides the wisdom and moral grounding of the play. The grandmother is positioned beside the peat fire throughout. In his home region of North Kerry, this setting was authentic and recognisable, and reflected the poverty of the 1950s in Ireland.

The stage design of Keane's play mirrored the blueprint that had been laid down by Synge in the early twentieth century. But in this case, the setting was used to critique the Irish state rather

⁶⁷¹ Flann O'Brien, *The Poor Mouth*, 16.

⁶⁷² John B. Keane, *Sive: A Play in Two Acts* (Cork: [Chester Spring, PA: Mercier Press; U.S. Distributor, Dufour Editions], 2009).

than reinforce an image of the domestic rural idyll. This makes clear, then, that the peat fire, and its material and symbolic centrality to Irish domestic life served multiple functions within broader ideas of the nation. The peat fire could serve as a link to traditional heritage, as a centralising symbol of Irish social life, or as a subversion of the form in efforts to critique the state.

III. The fire and the home

While the image of the peat fire was a pervasive symbol of the Irish nation, it is important to consider the realities of the domestic labour underpinning cultural representations of Irish life. As shown, the production of folklore and biographical materials in the 1930s was part of a wider political agenda towards the preservation of a specific kind of Irish culture. Nonetheless, these materials are still a valuable repository of the experiences of domestic life in rural Ireland. Therefore, materials from the Folklore Collection, the island biographies, and *Family and Community in Ireland* are examined to make visible the realities of domestic peat fuel consumption in Ireland.

Historian Liam Kennedy argues that peat “was an almost pure subsistence good.”⁶⁷³ Its value was geographically determined by communities living in proximity to bogs. There was no market or exchange value for hand-won peat and so it functioned as an accessible, relatively cheap, and localised fuel. Despite this lack of economic value, it was essential for households. As Edward Egan, an informant to the Folklore Commission, claimed, “the fire is the life of the home as without it there can be nothing done, and without the turf there can be no fire.”⁶⁷⁴ As a fuel, then, it was accessible and cheap, but it was also bulky, inconsistent, smoky, and dusty. These features informed the form and functioning of rural Irish homes.

⁶⁷³ Kennedy, ““The People’s Fuel,”” 26.

⁶⁷⁴ Edward Egan, “The Bog · Ferbane (Convent)” TSC, Vol. 814 (n.a.), 56.

This materiality of sod peat played an important role in the design and layout of rural domestic dwellings as well as the construction and functioning of hearths. Peat fuel further shaped the domestic labour that had to be undertaken in the home and, consequently, the gendered division of this labour. While the extraction of peat was primarily the work of men, once the fuel had been brought to the home, the fire maintenance, water heating, cleaning, cooking, and storing were primarily carried out by women. Illustrating this point, Peig Sayers, in her memoir from 1936, recalled a cold morning on An Bhlascaid Mhór. She wrote, “I wanted to light a fire and I told the boy who was standing at the doorway filling his pipe to bring me a little basket of turf from the rick. He looked at me sourly and said: ‘That’s woman’s work!’”⁶⁷⁵

Historian of architecture, Marion McGarry, in her work *The Irish Cottage*, argues that the availability of materials influenced the structure and design of domestic dwellings in Ireland.⁶⁷⁶ As a consequence of what she calls the “timber famine” in Ireland, a range of alternative materials were employed in the construction of homes, including stone, clay, salvaged bog deal (timber), and, in some cases, peat.⁶⁷⁷ Often a layer of peat would be placed under the thatch of a cottage roof as an insulating and waterproofing material.

Collectors for the National Folklore Collection were explicitly instructed to gather accounts of the design, materials and organisation of houses.⁶⁷⁸ The testimonies gathered shed light on the variation and complexity of domestic material culture, within which universal aims of shelter, warmth, and security were being pursued. For example, in 1937 an informant in county Leitrim explained that “some of the chimneys were made from mortar and stones while other chimneys

⁶⁷⁵ Sayers, *Peig*, 138.

⁶⁷⁶ Marion McGarry, *The Irish Cottage: History, Culture and Design* (Dublin, Ireland: Orpen Press, 2017).

⁶⁷⁷ McGarry, *The Irish Cottage*, 27.

⁶⁷⁸ Ríonach uí Ógáin writes, “collectors were encouraged to take photographs of the storytellers, their houses, and aspects of vernacular tradition and architecture,” in “Cnuasach Bhéaloideas Éireann,” 319.

were made from wattle and clay.”⁶⁷⁹ Materials used in the construction of houses were often chosen based on availability and accessibility, and so peat was central to any consideration of building materials.

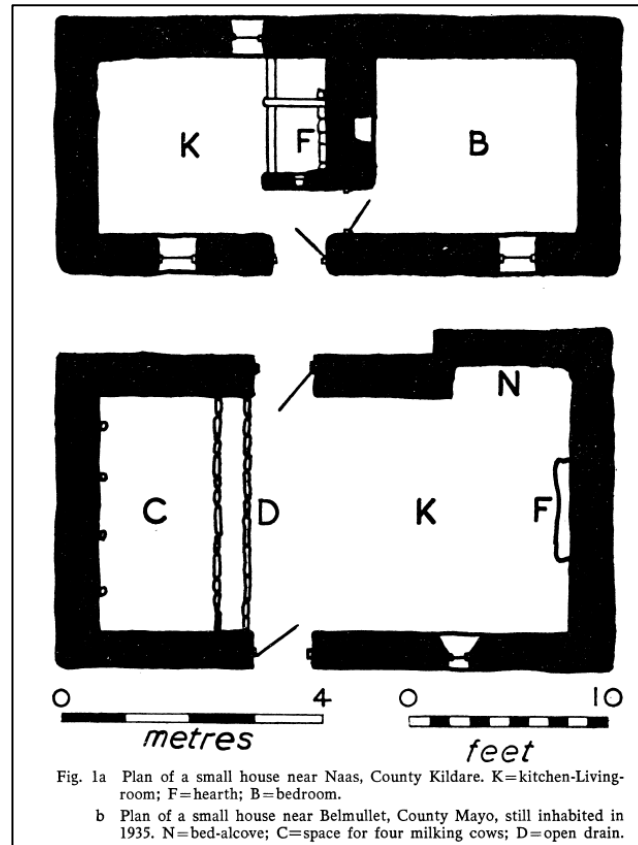


Figure 4.3 Primary layouts of rural Irish cottage, Ó Danachair, “Traditional Forms of the Dwelling House in Ireland,” (1972), 80.

The typical layout of a traditional Irish cottage can be considered as part of the European tradition of *ernhaus*, or “hearth house.”⁶⁸⁰ This meant that the design emerged as a vernacular style in response to the immediate needs and concerns of the inhabitants. From the seventeenth century

⁶⁷⁹ Mrs. Slavin, “Old Houses,” TSC, Vol. 202 (1937), 379-380.

⁶⁸⁰ Ó Danachair, “Traditional Forms of the Dwelling House in Ireland,” *The Journal of the Royal Society of Antiquaries of Ireland* 102, no. 1 (1972), 77.

onwards, this style became more formalised as the primary design of new builds.⁶⁸¹ The layout followed two basic patterns, with two main rooms that had the hearth situated either in the adjoining centre wall or at the gable end.⁶⁸² This can be seen in Figure 4.3.

The consideration of the location of the hearth within a dwelling was critical. Open fires provided a specific and limited range of heat and so having the hearth in a central location in the house was preferable to allow the heat to reach as much space as possible. Hearths themselves had to be multi-functional and thus were ideally deep and large enough to accommodate the fire, necessary cookware, a bench for sitting, and some storage space.⁶⁸³ Figure 4.4 shows a sketch of a hearth in County Cavan drawn by a collector of the Folklore Commission in 1938. Along with this sketch, Tommy Galligan, the informant, described the function and features of a typical hearth,

“it is necessary to boil very large pots of potatoes etc and altogether to make very extensive use of the fire, hence the convenience of having plenty of space at the hearth. Most hearths are paved with hard oval stones. ... Grates are never used because they would be unsatisfactory for burning mud turf which is the principal fuel.”⁶⁸⁴

While there were some standard features, the form of the hearth was impacted by availability of materials, income and, crucially, the fuel which would be burnt in it.

The main household tasks that centred around the fire were cooking, heating water, and cleaning. The centrality of peat for domestic life was clear in the testimony of Jack Kelliher, a man from County Kerry. He recounted a conversation with his neighbour to a Collector for the Folklore Collection in 1950. He said, “Jack Dan down here drew down turf one day to me. ‘Well,’ says he

⁶⁸¹ O'Reilly, “Hearth and Home: The Vernacular House in Ireland from c.1800,” *Proceedings of the Royal Irish Academy: Archaeology, Culture, History, Literature* 111C, no. Special Issue: Domestic life in Ireland (2011) (2011): 193.

⁶⁸² Ó Danachair, “Traditional Forms of the Dwelling House,” 79-80.

⁶⁸³ O'Reilly, “Hearth and Home,” 205-6.

⁶⁸⁴ Tommy Galligan, “Houses - Hearth and Brace of County Cottage,” TSC Vol. 978 (1938), 93-94.

to me, ‘what would your turf do?’ ‘What would it do,’ says I, ‘only make a good fire and boil and bake for me.’”⁶⁸⁵ In this account Kelliher and ‘Jack Dan’ understood the peat itself as an agent within the household that was responsible for the kinds of labour that its heat energy facilitated. While the story was one in which the turns of phrase suggested an appreciation for the peat and how it allowed the actors to meet their primary needs, it also obscured the labour-intensive and almost constant work of women within households who were mediating this energy so that their families had food and clean water and heat.



Figure 4.4 Sketch of hearth in Tommy Galligan, “Houses - Hearth and Brace of County Cottage,” TSC Vol. 978 (1938), 93.

In Arensberg and Kimball’s *Family and Community in Ireland*, the presence of the peat fire was ubiquitous in the home. In a typical day, as they described it, “to the woman falls the first duty of the day. She must rake together such live ashes as remain in the slaked turf fire in the

⁶⁸⁵ Jack Kelliher, “The Fire,” MS 1177 (1950), 117-118.

hearth, put down new sods for the fire, and rekindle the blaze.”⁶⁸⁶ It was the matriarch’s duty to maintain the fire for heating and cooking, a task which required continuous effort and skill. A multitude of cookware and utensils specific in their design for use on the open fire could be found in households for the preparation of food for humans and animals.⁶⁸⁷ Water had to be gathered from a well, often miles away from the house. This water was required by the household for cooking, bathing, and cleaning and had to be boiled on the fire. Informants to the Folklore Collection described variations in cooking practices in their testimonies.⁶⁸⁸

Peat extraction was a summer activity and thus the stock gathered for a household would typically have to sustain a family for the entire winter. Furthermore, peat burned with a lower heat than other fossil fuel sources. In order to maximise efficiency of the fire and maintain the supply of fuel throughout the winter, fires had to be tended constantly and carefully. The painstaking intricacy of this was illustrated in the 1938 testimony of Mary Lynch to the Folklore Collection in Westmeath who explained,

“in nearly every country house the seed of the fire is kept over night for kindling the fire next morning. This seed consists of red sods of turf, which are fixed together in a hollow near the fire and covered over with ashes. The ashes keep the sods together during the night and when the fire is being kindled each morning, the kindling is taken from this overnight stone. The red sods or parts of which remain are erected on the clean hearthstone and fresh sods are set around the red or lighted embers in such a way as to admit the air between the sods after a few minutes blazes burst through the openings and a most comfortable bright fire is to be seen.”⁶⁸⁹

An intimate understanding of the properties of peat fuel allowed for the development of specific practices of maintenance which in turn allowed for the efficient use of limited resources.

⁶⁸⁶ Arensberg and Kimball, 35.

⁶⁸⁷ O’Reilly, “Hearth and Home,” 208.

⁶⁸⁸ Francis Earley, “Preparation of Food” TSC, Vol. 206. (1938), 502.

⁶⁸⁹ Mary K. Lynch, “Structure of Houses,” TSC, Vol. 726 (1938), 245.

This embedded these interactions within a constant cycle of maintenance in the performance of household tasks, which primarily occupied the time and energy of women in the home.

This mundane entanglement was also part of a cycle of cleaning as a function of the materiality of sod peat. The fuel was dirty to handle and produced smoke which covered the interiors of domestic dwellings in black dust. This was highlighted in an excerpt from the Folklore Collection taken from a woman's testimony in Cavan in 1938, "it was very difficult to keep those old houses clean and free from dust as the peat produced a lot of ashes and it settled on the walls. When the walls were dusted, flakes of the white-wash of ages, the only plaster the walls ever knew, fell off."⁶⁹⁰ Maintaining the cleanliness of the home was a task which fell to women, and this task was made more laborious by the constant smoke and dust from peat fires.⁶⁹¹

The labour associated with maintaining the fire was also connected to religious beliefs and practices. Charlie Conway, an informant to the Folklore Collection in Tyrone in 1953, spoke of the interconnectedness of the fire with Catholic faith and uncertainty surrounding illness.⁶⁹² He described how the behaviour of the fire, that is, the movements and patterns of embers or sparks, could give an indication of a person's health or even death. This relationship between the fire and the afterlife can be seen in many testimonies to the Folklore Collection. Another example comes from the recollections of Jack Kelliher in County Kerry in 1950. He said,

⁶⁹⁰ Maureen O'Connell, "Old Houses," TSC, Vol. 999 (1938), 213.

⁶⁹¹ McGarry, *The Irish Cottage*, 30-31.

⁶⁹² According to Conway, "the fire was one of the greatest signs of life and death long ago. I'm speaking of the open turf fires now, not them ranges. First of all where a man or woman was dying, the fire was never let out at all. Twas banked at night if folks weren' stopping up with the sick man, and the red embers that fell out during the night were a sign that the person was going to die, and the amount of embers told that a man would be either a long or short spell in Purgatory according to the amount that was out." In Charlie Conway, "Lore of the Fire," MS, Vol. 1371 (1953), 231.

“at night when the people are going to bed some people have cold ashes in a bucket and they cover the fire with the cold ashes and that keeps the seed for the morning but I couldn’t get myself to cover it up at night only with some sods of wet turf so that it wouldn’t burn out quickly. I never put ashes on it and the reason for that is if the Holy Souls came to the house at night while I’d be in bed that they could sit by the fire.”⁶⁹³

His account illuminated the interconnectedness of the material and the spiritual. Kelliher believed that the souls of the dead would visit the house overnight and he was conscious that any activity related to the fire should account for this possibility.

But his account also showed how customs and beliefs framed labour, in particular the labour of maintaining the fire. Maintaining a spark in the hearth overnight reduced the need to start the fire from scratch in the morning, saving time and fuel. Understanding that the “seed” could be maintained by covering it with cold ashes overnight meant a saving of labour for the household. But Kelliher sacrificed whole peat sods, albeit wetted to burn slowly, in order that the “Holy Souls” might be accommodated should they stop a while in the house overnight. Peat here acted as a material means through which to fulfil spiritual and religious customs and obligations.

Writing in 1946, Folklore Collector Caoimhín Ó Danachair argued that “in Ireland the functional value of the hearth is not greater than its social importance.”⁶⁹⁴ The recollections of informants to the Folklore Collection demonstrate that, beyond providing the energy necessary for survival, the fire itself was at the centre of customs, beliefs, and social life. In *Family and Community in Ireland*, Arensberg and Kimball documented their observations of social order and hierarchies in rural communities.⁶⁹⁵ This included communities in market towns as well as farming households. An observation from their work was that familial and social hierarchies were often organised around the fire. Their case study from the village of Rynamona in County Clare

⁶⁹³ Kelliher, “The Fire,” MS 1177 (1950), 109-110.

⁶⁹⁴ Danachair, “Hearth and Chimney,” 91.

⁶⁹⁵ Arensberg and Kimball, *Family and Community in Ireland*.

highlighted some important organising principles regarding age and gender. They described the house of “old man O’Donoghue” as an “old men’s house,” by which they meant a gathering place for the older men of the community. Here important matters of public life, farming, and community were discussed.⁶⁹⁶ The group would gather around the open fire with each member of the group having closer access to it according to their importance. This access spoke to the perceived wisdom and status of older members of the community, especially men. Women were frequently excluded from these discussions.

However, there did seem to be some flexibility, and particularly reverence, for the wisdom of older women. Although, according to Arensberg and Kimball, this was typically limited to matters of the family sphere and less so the public sphere.⁶⁹⁷ The memoir of Peig Sayers complicates this assessment somewhat with descriptions of both older men and women beside the fire talking late into the night about “the affairs of the world.”⁶⁹⁸ The hearth with its burning peat could imbue status to members of the household and community through access and positionality. It served as a marker of this status through visible and repeated patterns of social organisation within the home. This was further visible in *The Islandman* with O Crothan describing, “the old people used to spend the night in that beside the fire, with an old stump of a clay pipe going, or two pipes if there were two of them living, and smoking away; they would have a wisp of straw for a pipe-lighter. A good fire of fine turf smouldered away till morning.”⁶⁹⁹ The heat from the fire was a precious resource and access to it informally reflected familial, community, and gender hierarchies.

The peat fire was also a focal point for entertainment and social gatherings. Neighbours would travel to one another’s houses and gather around the fire to tell stories, play music, and sing

⁶⁹⁶ Arensberg and Kimball, 177.

⁶⁹⁷ Arensberg and Kimball, 196.

⁶⁹⁸ Sayers, *Peig*, 42.

⁶⁹⁹ Ó Crohan, *The Islandman*, 26–27.

songs. This practice enabled the preservation of an oral tradition that spanned generations. This was clear in the account of Kathleen Lavin from County Sligo, speaking to a Folklore Collector in 1938,

“during these month we can have plenty of enjoyment in the house. When the ramblers gather in at night they sit around a cosy bright warm fire, of Irish peat with a nice clean hearth. There is an old proverb: - ‘A clean hearth a bright fire and an old tale.’ They tell stories of olden times and they also tell ghost stories. I like stories very much especially those told about ghosts and about the bitter hard times that the long-suffering Gael had during the cruel harsh, Penal-Laws and about the famine and plague that followed.”⁷⁰⁰

These gatherings provided social interaction, and the passing on of history and folklore from generation to generation. This practise and the peat fire were deeply interconnected. In the Munster-Gaelic tradition, the social practice of storytelling was known as *bothántaoícht*, and this custom was a common feature within the Island biography texts.⁷⁰¹

It is impossible to conceive of peat fuel in the domestic sphere in rural Ireland merely as an object with which ordinary processes of heating, cooking, and lighting were carried out. It did perform these functions, through customary labour processes developed over generations of Irish people, particularly women. But its historical ubiquity in Ireland imbued it with meaning beyond its materiality. This meaning-making happened through peat’s role as mediator of customs and beliefs, its positionality as a focal point in domestic spaces for social gathering and community entertainment, and its consistent appearance in the political and literary construction of Irish national identity.

⁷⁰⁰ Kathleen Lavin, “Games We Play,” TSC, Vol. 186 (1938), 196.

⁷⁰¹ Sayers, *Peig*, 14; 23. Translated as ‘rambling.’

IV. Domestic Modernity

Alongside the drive to preserve and propagate imagery and culture surrounding rural domestic Irish life, other forces within the Irish government were developing strategies to achieve a new kind of domestic reality. This is evident in Chapters Two and Three, which discuss the institutional and governmental drives towards the mechanisation of the peat industry and the generation of electric power. Underlying these initiatives was not only a concern for the economic progress of the nation, but also the ways that this modernisation could improve the lives of Irish people. Therefore, the transformation of the modes of energy consumption in the home became a feature of development narratives. This was especially clear in the discourse surrounding the Rural Electrification Scheme (1945).

Although the primary aim of this Scheme was the introduction of electricity to improve agricultural practices, connecting rural homes to the grid was also an important priority for the government. At the national level, the desire for an efficient and modern domestic sphere was articulated through debates surrounding the Scheme. The language of the debates repeated themes of an end to ‘drudgery,’ labour saving, and improved living conditions. This was clear in the words of Patrick Cogan, a Clann na Talmhan T. D. from Wicklow,

“there is no doubt that the extension of electric current, generally, to people living in rural dwellings will very largely improve the living conditions of our people in the country. It will contribute very largely to alleviating the drudgery which is associated with the work of the rural dweller's wife in the home and around the homestead. The household duties of the womenfolk in the country will be made lighter if electric current is provided.”⁷⁰²

⁷⁰² Patrick Cogan speaking in Houses of the Oireachtas, “Committee on Finance. - Electricity Supply (Amendment) Bill, 1944—Second Stage (Resumed). – Dáil Éireann (12th Dáil),” text, January 25, 1945, Ireland, <https://www.oireachtas.ie/en/debates/debate/dail/1945-01-25/31>.

Beyond Cogan's recognition of the practical benefits of rural electrification, there was also a more profound sense among some policy makers that the domestic sphere had the potential to be intellectually stimulated and improved. James Larkin Jr., a Labour Party T.D., asserted,

“in our country, electrification is more than merely producing light or power. It is bringing light into darkness. The great value of this proposed scheme of rural electrification is not that we are going to have farming by electricity instead of by hand but that we are going to put into the homes of our people in rural areas a light which will light up their minds as well as their homes. If we do that we will have brought a new atmosphere and a new outlook to many of those people.”⁷⁰³

This statement echoed Mary Butler's earlier vision for the domestic sphere as a space for enlightenment, but with the profound addition of electric light. Beyond the material implications of rural electrification, the sense that new technologies could also improve the intellectual and consequently socio-cultural experience of rural life was significant.

The key themes and concerns that emerged from the debates surrounding the bill were the alleviation of unemployment, the improvement of rural standards of living, the modernisation of agricultural practices, and improving the drudgery of rural life. Of course, this kind of discourse was not unique to Ireland. It mirrored the rhetoric of the earlier progressive era in the United States where federal schemes to extend electricity networks to rural areas were imbued with an

⁷⁰³ James Larkin Jr. speaking in Houses of the Oireachtas, “Committee on Finance. - Electricity Supply (Amendment) Bill, 1944—Second Stage (Resumed). – Dáil Éireann (12th Dáil),” text, January 25, 1945, Ireland, <https://www.oireachtas.ie/en/debates/debate/dail/1945-01-25/31>.

ideological meaning.⁷⁰⁴ Plans for electric infrastructural development in inter-war Europe had also employed this narrative of social improvement.⁷⁰⁵

In post-war Ireland, the Oireachtas debate surrounding the Rural Electrification Scheme was not the only forum for addressing the challenges of domestic life. The arduous labour of energy consumption was incredibly salient for Irish women. The Emergency years had necessitated rationing and limited access to resources. In the years following, the collective memory of these hardships was articulated through women's organisations including the Irish Countrywomen's Association and the Irish Housewives Association. These organisations focused on women's work and position in society. They organised around access to resources and information for women in rural and urban settings. The aspirations of these groups aligned with the shifting paradigms of Irish energy culture like the introduction of labour-saving domestic appliances through electrification.

The Irish Countrywomen's Association had been in existence since 1910. This organisation functioned to empower housewives through education and support networks.⁷⁰⁶ The Irish Housewives Association was formed in 1942 in direct response to the harsh experiences of Emergency rationing.⁷⁰⁷ Through its journal *The Irish Housewife*, actors within the organisation often expressed political and cultural critiques of the position of housewives in Ireland. Articles in the journal called for the application of scientific and economic principles to domestic labour practices and technologies to improve labour conditions in the home. They also expressed concern

⁷⁰⁴ Jones, *Routes of Power*, 208.

⁷⁰⁵ Schot Johan and Lagendijk Vincent, "Technocratic Internationalism in the Interwar Years: Building Europe on Motorways and Electricity Networks," *Journal of Modern European History* 6, no. 2 (January 1, 2008): 196–217.

⁷⁰⁶ Aileen Heverin, *The Irish Countrywomen's Association: A History, 1910 - 2000* (Dublin: Wolfhound Press, 2000).

⁷⁰⁷ Hanna Sheehy Skeffington, "Random Reflections on Housewives," *The Irish Housewife* 1 (1946), 21.

over the price and quality of foods with the aim of promoting greater health and hygiene outcomes.⁷⁰⁸

The use of women's magazines to mediate information regarding the utilisation and application of new technologies of domestic consumption was a common occurrence in the history of domestic energy transitions. Historian Abigail Harrison Moore identifies this trend in England in the late nineteenth century, where guidebooks and magazines were utilised to transmit advice to women in the home, alongside increasingly onerous expectations of their domestic roles.⁷⁰⁹ Similarly, historian Diana Montaña describes the centrality of Mexican author Josefina Velázquez de León in Mexico's domestic energy transition in the 1930s and 1940s.⁷¹⁰ She argues that despite the concerted efforts of the state to promote the adoption of electric technologies, the "cult of domesticity found its voice in women's magazines, advice literature, newspapers, fashion guides, catalogs, and works of fiction that reached millions."⁷¹¹ New norms and expectations of domestic labour were transmitted through the proliferation of new kinds of media.

Margaret Moffett, a contributor to *The Irish Housewife* magazine in 1946, articulated the contemporary dissatisfaction with domestic labour, writing, "deep down in our [housewives'] honesty we know that the open fire is hardly more than a cheerful decorative feature whose charm is precariously balanced against the almost automatic self-sacrifice of the average housewife."⁷¹² As well as repeated assertions by the Irish Housewives Association that women deserved a place in public life, they were also concerned with alleviating the challenges of domestic labour. In another

⁷⁰⁸ *The Irish Housewife* (1946 – 1952).

⁷⁰⁹ Abigail Harrison Moore, "Agency, Ambivalence, and the Women's Guide to Powering Up the Home in England, 1870-1895," in Harrison-Moore and Sandwell, *In a New Light*, 90-113.

⁷¹⁰ Diana Montaña, *Electrifying Mexico: Technology and the Transformation of a Modern City*, First edition (Austin: University of Texas Press, 2021).

⁷¹¹ Montaña, 193.

⁷¹² Margaret Moffett, "That Ideal Home," *The Irish Housewife* 1 (1946), 12.

article from 1949, reproduced from the Irish Agricultural and Organising Society, a suggestion was made that a “housewives research bureau” be developed.⁷¹³ The author argued,

“as a housewife, and a country housewife at that, I can’t help being a little envious of this efficiency campaign which is going on around me. While life is being made easier and conditions better for almost every other type of worker, our lot becomes increasingly difficult. Hard work, which, in the case of the country housewife often amounts to drudgery, is unavoidable, but our arduous tasks could be made lighter and a deal more interesting if we were better enlightened concerning labour-saving methods and equipment.”⁷¹⁴

When this article was published in 1949, discourse surrounding the potential influx of Marshall Aid from the United States and post-war productivity meant that efficiency was a key metric of investment and development.⁷¹⁵ This discourse was evident to women engaged in intensive domestic labour. Their desires for new appliances to alleviate this work were articulated through the IHA and the ICA.

Chapter Three of this thesis discusses how part of the challenge for early advocates of the use of peat for electricity generation was the lack of a consumer market in Ireland. The limitations of the transmission network were one thing, but for the ESB the challenge of convincing people that the benefits of electricity were worth the costs informed widespread marketing campaigns. Advertising became a new medium through which the idea of the domestic sphere was articulated. As early as the 1930s, advertisements targeted at women and homemakers emphasised the value of electricity as a modernising force in the home.

⁷¹³ Tigheachas, “A Housewives Research Bureau,” *The Irish Housewife* 4 (1949), 85 – 89.

⁷¹⁴ Tigheachas, 85.

⁷¹⁵ Peter Murray, “Ireland and the Productivity Drive of Post-war Europe,” in Girvin and Murphy, *The Lemass Era*, 66–71.

An ESB advertisement from the 1930s titled “A Valiant Woman” was an early example of the industry pursuing women specifically as consumers of electricity.⁷¹⁶ The advert framed the promises of electric modernity to Irish women as not only having material implications for their lives through labour-saving, “cleanliness,” and “comfort;” but also as a means to live a new kind of life.⁷¹⁷ As shown in figure 4.5, the advert claimed that “the successful management of a home under modern conditions is a task to call forth the utmost valour in the modern woman.”⁷¹⁸ This advertisement embedded new expectations of what domestic work should look like: it should be

⁷¹⁶ ESB, “A Valiant Woman,” c.1930s. <https://esbarchives.ie/2016/03/09/esb-advertising-1920s-and-1930s/#jp-carousel-1307>.

⁷¹⁷ ESB, “A Valiant Woman.”

⁷¹⁸ ESB, “A Valiant Woman.”

clean, convenient, and safe. It acknowledged the domestic labour realities of the time and promised improvement through the introduction of electric appliances.

New ideas about the Irish home as the heart of the nation took root in the Rural Electrification



A Valiant woman

Welcomes difficulties—for the joy of overcoming them. The successful management of a home under modern conditions is a task to call forth the utmost valour in the modern woman. High cost of living, inadequate income, complex household duties, shortage of domestic help, wide field of interest outside the home, reaction against the drudgery of old-fashioned home-work—a pretty problem, and where is its solution?

ELECTRICITY
FOR EVERY HOUSEHOLD TASK!

ELECTRICITY
For Lighting, Heating, Cooking, Cleaning, Laundering, Water-heating, etc.

ELECTRICITY
For Cleanliness, Comfort, Convenience, Simplicity, Speed, Safety, Economy, Ease and Efficiency.

ELECTRICITY
The Modern Help for the Modern Woman in the Modern Home.

Let us wire your home for the full service of
ELECTRICITY

ELECTRICITY
SALES SHOWROOMS
(Operated by the Electricity Supply Board)
25 ST. STEPHEN'S GREEN, DUBLIN

Write for our illustrated booklet "The House You Want" and other literature on the proper wiring of the home. Also for particulars of our Deferred Payment Plan for wiring and our Hire Purchase System for Electrical Fittings and Appliances.

Figure 4.5 "A Valiant Woman," ESB Advertisement, c.1930s

Scheme. The cultural image of the rural Irish cottage began to come into tension with the modernising impulses of actors within the Irish government and the commercial and semi-state enterprises of the Electricity Supply Board and Bord na Móna. While there had always been desire for industrial development in the fields of energy production, the ways that the consumption of energy could shape and be shaped by domestic Irish life began to take hold in the 1950s, and more pronouncedly in the 1960s as national economic growth gave rise to a growing consumer culture in Ireland.

Historian SORCHA O'Brien argues that the process of rural electrification in Ireland was enabled by a multi-media approach to information dissemination and the presentation of a reimagined Irish energy landscape that blended the tropes of the conservative image of rural life with a vision of modernity in the home.⁷¹⁹ She also highlights the unique approach taken by the ESB in adopting the kinds of publicity schemes which were becoming popular in the USA at this time.⁷²⁰ As such, the media through which the *home* as the *nation* was being presented and reproduced was significant in convincing a wary Irish public of the benefits of electrification. Both O'Brien and historian Caitríona Clear argue that the effectiveness of this campaign was also in part the result of significant buy-in from organisations like the Irish Countrywoman's Association and The Irish Housewives Association. These groups acted as mediators between industry and housewives in the dissemination of information and resources, with the ultimate aim of improving domestic labour conditions.⁷²¹

This was exemplified in an article from 1946 that was published in *The Irish Housewife* called 'Electricity in the Home.'⁷²² The author, Robert N. Tweedy, described a model home powered entirely by electricity, supplemented with photographs from the ESB. While detailing the limitations of such a system during the energy insecurity of the war, the article nonetheless laid out all the kinds of labour-saving appliances which were available to the housewife through a transition to electric power. Tweedy further laid out the costs of appliances as well as the unit rates of electricity. The article made comparisons between electrical appliances and solid fuel appliances

⁷¹⁹ SORCHA O'Brien, "Electricity, Modernity and Tradition during the Irish Rural Electrification 1940-70," *Journal of Energy History* 8 (2023): 1–18.

⁷²⁰ O'Brien, 4.

⁷²¹ O'Brien, 1–18; and Caitríona Clear, *Women of the House: Women's Household Work in Ireland, 1926-1961: Discourses, Experiences, Memories*, Women in Irish History Series (Portland, OR: Irish Academic Press, 2000).

⁷²² Robert N. Tweedy, "Electricity in the Home," *The Irish Housewife* 1 (1946). (son of Robert N. Tweedy featured in Chapter One of this thesis).

and ended by stating, “there is no moral to this tale, merely an obvious conclusion, that the wise housewife uses electricity where she can.”⁷²³

At the domestic, political, and industrial level, new demands and expectations about how the domestic sphere should function were being expressed. This shift was occurring because of material innovations in the realm of electrification that generated a consumption-based energy economy from the 1960s onwards. The limitations of the rural domestic imaginary were being brought into sharp relief by political actors and women themselves and, as a consequence, the energy industry responded with new visions of the modern Irish home.

A film produced by the ESB in 1961 featured a tour of the ESB’s exhibition in the Royal Dublin Society where Francis Condell, a well-known media personality, narrated the features of the ESB’s electric kitchen of the future. Despite the film clearly promoting electric appliances, the model home still features a hearth, although there was no fire lit. Condell stated,

“this cottage is like so many traditional farm cottages in Ireland, it has white walls, natural timber and the familiar open hearth. The mantelpiece, the period china, and the old-style lamps have been preserved but the open fire that made all that dust and dirt has gone. The fireplace still looks cheerful, but its work is now done by an up-to-date kettle, cooker, and storage heater. [...] The out and out cleanliness of electric lighting, cooking, and heating has done away with the old-time drudgery.”⁷²⁴

⁷²³ Tweedy, 26.

⁷²⁴ ESB, *Modern Living – Country Style*, 1961. <https://esbarchives.ie/2018/11/14/modern-living-country-style-1961/>.

The familiar promises of cleanliness, efficiency, and the end to drudgery all appeared in the text of the film but the symbols and aesthetics of the rural cottage still featured as important design elements. O'Brien argues that this combination of traditional aesthetics with modern appliances was part of a broad strategy by the ESB to ease consumers anxieties about the modern domestic imaginary.⁷²⁵ The hearth, with all its cultural associations, remained a focal point for the living room, but the labour associated with it was gone.



Figure 4.6 ESB advert espousing the virtues of new water heating systems. “Where’s the Fire?” *The Irish Countrywoman* 1, no. 6 (1966), 20.

Another ESB advertisement from 1966 went as far as to remove the hearth altogether. The advert, entitled “Where’s the Fire?,” illuminated the new priorities of producers and consumers of domestic energy.⁷²⁶ As shown in figure 4.6, the advert was promoting an electric water heating system and described the open fire as “unnecessary” and “unwanted,” articulating that new energy

⁷²⁵ Sorcha O’Brien, “Electricity, Modernity and Tradition,” 15.

⁷²⁶ ESB, “Where’s the Fire?” *The Irish Countrywoman* 1, no. 6 (1966), 20.

systems must be the preferred choice of consumers.⁷²⁷ Electricity promised “no cleaning, no fetching and carrying, no fumes, no dirt.”⁷²⁸ The new domestic sphere was presented as a space without an open fire or any of the excessive labour associated with it.

The contradiction within this campaign to create a new electric domestic imaginary was, of course, the de-coupling of domestic labour from the physical object of energy, that is, fuel. Under the system of subsistence consumption, the materiality of peat fuel, the dust, smoke, and smell, had been an integral part of the labour. These characteristics of the fuel were now redirected to power stations where peat fuel was used to produce the electricity for domestic consumers. The increased availability of electricity, and the progress of the rural electrification scheme, were entirely entangled with the increased industrial extraction of peat from BNM bogs.

V. Peat in a new energy market

In the mid twentieth century, following the Second World War, political and industrial actors constructed a new domestic imaginary to facilitate the kind of energy transition that they were trying to achieve. The technologies of energy consumption and the ways in which these were presented to the public changed rapidly. New ideas about domestic labour and the expectations of women were embedded in political discourse and policy-making that strove for the modern industrialisation of the domestic sphere. This messaging was reproduced in industry media and presented a new Irish domestic imaginary to the public that rejected the embedded norms and practices of older forms of peat consumption. For BNM, then, this meant that innovation was necessary not only in extractive practices but also in the generation of more efficient forms of peat itself, as well as appliances that could compete in the new complex fossil fuel economy.

⁷²⁷ ESB, “Where’s the Fire?”

⁷²⁸ ESB, “Where’s the Fire?”

Within the changing domestic energy market, BNM was under pressure to create peat fuel products which could meet the demands of modern consumers. Competition from other fossil fuels and the introduction of electrical appliances meant that new and innovative ways to consume peat had to be introduced. The low calorific value and the dust and smoke associated with burning sod peat limited its acceptability as a solid fuel to all but those burning it out of necessity.

Mechanisation of peat extraction allowed for innovation in designing new peat products for consumption. By the late 1940s, many BNM bogs were producing *machine turf* which provided a fuel that was of a more consistent quality than hand-won sod peat. Machine turf was suitable for use in solid fuel burning appliances and open fires. Despite its material improvements on hand-won sod peat, it still suffered from an association with emergency-era peat mandates. Therefore, BNM employed modern advertising strategies to change this association towards a more contemporary and efficient product. This is clear in the advertisement in figure 4.7 from 1959, which showed a sod of machine-turf as half-peat, half-robot positioned in front of the infrastructure of post-war peat industry.



Figure 4.7 BnM Advertisement for machine-turf in *Administration* (1959), 89.

The Board had been producing milled peat in Lullymore throughout the war. This method of extraction was expanded to other sites in the early 1950s. This new form of peat expanded the possibilities of new energy conversions. Milled peat was used to generate electricity and produce briquettes. The peat briquette was formed from milled peat that has been compressed at high pressures and compacted. The high-density brick that resulted from this process burned more consistently, hotter, and for longer than traditional sod peat. Briquettes were easier to store, more energetically efficient and, due to Bord na Móna's investment in marketing and distribution, provided Irish households with an efficient and convenient fuel. Writing in 1959, mechanical engineer Jim Martin outlined the success of briquettes for the Board,

“in general it can be said that the briquette represents the best effort to date at converting peat into a fuel of standard appearance, combustion characteristics, moisture content, ash value and calorific value. The appearance of the finished product is pleasingly polished, regular in shape and of satisfactory bulk density.”⁷²⁹

While the Board had been producing briquettes at the Lullymore factory with some success since 1939, it wasn't until 1956 that the factory was producing its designed output of 50,000 tons of briquettes per year.⁷³⁰ After this, two more briquette factories were commissioned. These were 100,000 ton/annum factories in County Offaly, at Derrinlough and Croghan. By 1975, the total annual production of briquettes from these three factories was 317,329 tons.⁷³¹

With machine turf and briquettes the material deficiencies of hand-won sod peat were somewhat resolved. BNM then turned its attention on the development of appliances for the consumption of these products. As early as 1941, INDC had commissioned a report by the Industrial Research Council to investigate the necessary requirements for appliances to burn peat.⁷³² This report was instigated during the Second World War when the increased consumption of peat was a necessary condition of coal shortages. In his consideration of the design of cooking ranges, electrical engineer and designer Laurence Kettle spoke to the multidimensional labour which had to be performed using the range. He wrote,

“it must serve a variety of purposes, including cooking food in the oven, cooking food and heating water on the hotplates, heating water in the boiler, drying clothes, and in the winter time heating the kitchen. It must also be of a design which will not give too much trouble

⁷²⁹ J. Martin, “Peat Briquetting,” *Administration* 7, no. 1 (1959), 77.

⁷³⁰ F. Barron, “Briquetting of Milled Peat in Ireland,” in *Production, Transportation and Utilization*, vol. 1 (Second International Peat Congress, Leningrad, 1963), 483.

⁷³¹ Bord na Móna, “Annual Report,” 29 (1974-75), 29.

⁷³² Laurence Kettle, “Turf as Domestic Fuel” (Industrial Research Council, 1941). NAI TSCH/3/S/8597/B1.

or need too much skilled attention. Furthermore, it is a commercial necessity that it must be available at a reasonable price so as to compete with other appliances.”⁷³³

Kettle conducted tests on a prototype cooking range and measured its efficiency by cooking a variety of foods, boiling water, and measuring the room temperature at different intervals. He demonstrated his recognition of the domestic labour which would be performed with the appliance, as well as the necessity for it to be competitive in an increasingly diverse market.

These insights served the BNM Experimental Station which was set up in 1946 to investigate new methods of extraction, uses of peat, and appliances for the domestic consumption of peat fuel.⁷³⁴ There was an awareness and acknowledgement of the need for innovation in domestic appliance design as a consequence of new expectations of consumers, and competition from other sources. This challenge was illuminated in a research paper produced for the 1954 International Peat Symposium by Frank Lunny, an engineer at the Experimental Station. Lunny wrote,

“the subject of fuel in the home is about the least attractive of all branches of fuel technology. The fact that questions of architecture, personal comfort, dietics and human psychology play as great a part in the problem as the science of combustion make it a rather unsatisfactory one for most engineers. Nevertheless, the immense possibilities of fuel saving which lie in this field render the quest of efficient domestic appliances an extremely urgent one.”⁷³⁵

Lunny went on to argue that the potential for peat fuel products to dominate the Irish market was limited only by the failures of the industry to develop adequate appliances that would convince consumers of their cost efficiency over time. He identified the critical factors to consider

⁷³³ Laurence Kettle, “Turf as Domestic Fuel,” 7–8. NAI TSCH 3/S/8597/B1

⁷³⁴ Clarke, *Brown Gold*, 95-97.

⁷³⁵ F. Lunny, “Use of Turf in Domestic Appliances,” *International Peat Symposium* (Dublin, 1954),

when designing appliances for domestic use as “efficiency, saving of labour, reliability, simplicity, [and] cheapness.”⁷³⁶ He recommended design specifications for various combustion appliances for use in the home. He further recommended that “the best thing to do about open domestic fires, from a fuel efficiency point of view, would be, of course, to abolish them completely and substitute, in large buildings, central heating, or in small homes, free-standing stoves.”⁷³⁷ This demonstrates that, even for proponents of solid fuel, the open fire was an obstacle to domestic modernity.

In the post-war period there was an influx of the kinds of appliances that Lunny described. Companies manufacturing Stanley, Rayburn, and Aga stoves adopted the same language of efficiency, labour saving, and cleanliness in advertising their products. In 1950, an Aga advertisement in *The Irish Housewife* professed that the appliance would mean “no standing over pans; no gadgets to watch [. . .] Maintaining ‘right’ temperatures always, and continuously on duty.”⁷³⁸ An advert in the *Irish Independent* in 1956 promised that the Rayburn stove “cooks all meals [. . .] heats all water [. . .] burns any fuel [. . .] warms kitchens [. . .] cuts fuel costs.”⁷³⁹ In 1960, an advert in the *Irish Farmers Journal* claimed that “the Stanley is a superb cooker, supplies all your hot water and saves on fuel costs.”⁷⁴⁰ Embedded in the copy of all of these advertisements was the assertion that one could burn coal, machine turf or briquettes in these appliances. As well as this, the text suggested that the appliance itself was *doing* the work. The implication was that homemakers could passively observe as their household labour was conducted by a machine. The stoves and ranges were consistently described as new, modern, clean, and efficient. Catriona Clear

⁷³⁶ Lunny, “Use of Turf,” 2.

⁷³⁷ Lunny, 8.

⁷³⁸ “Meals cook themselves . . . more deliciously,” *The Irish Housewife*. 1950.

⁷³⁹ “Rayburn,” *Irish Independent*. September 22, 1956.

⁷⁴⁰ ‘The Stanley,’ *Irish Farmers Journal* October 15, 1960.

argues that although the introduction of ranges into Irish homes alleviated the physical strains associated with open fires, they still required regular tending, and they were difficult to clean.⁷⁴¹

Historian David Edgerton argues that these kinds of domestic appliances were relatively unchanging and static in their design and did not, in fact, represent a new era in the conduction of domestic work.⁷⁴² The design of the Aga, for instance, had remained almost unchanged since it was originally developed in 1929.⁷⁴³ Edgerton argues that the availability of inputs to these systems, like electricity, gas, and water, are better indicators of a society's level of development. In Ireland, the persistence of solid fuel appliances reflected the limitations of the state's capacity to provide universal access to such inputs. Even when electricity was finally available in all households in 1974, peat was still the most economic fuel choice for many rural consumers.

From BNM's perspective, the relative flooding of the market with appliances more suited to the consumption of their new peat products was a positive. Machine turf and briquettes consistently featured as part of the promotion of these appliances. However, the BNM Experimental Station continued research and development of their own appliances that were more specifically suited to peat. This venture into appliances was yet another means by which the peat industry expanded its operations. In the pursuit of consumers, the company adopted similar language in their advertisements for these appliances.⁷⁴⁴

In 1950, in conjunction with Waterford Ironfounders Ltd., BNM developed and manufactured a room heater specifically for briquettes called the *Móna*. The limitations of their attempts to market this product, however, were noticed by policy makers. In debates surrounding developments in the peat industry in 1959, Mayo Senator J. B. O'Quigley implored BNM to

⁷⁴¹ Clear, *Women of the House*, 163.

⁷⁴² Edgerton, *The Shock of the Old*.

⁷⁴³ Edgerton, 57.

⁷⁴⁴ Clarke, *Brown Gold*, 83.

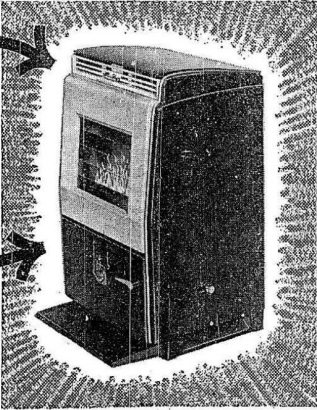
emulate the efforts of the ESB in targeting housewives as consumers and advertising to them to raise the popularity of peat as a household fuel. He stated,

“I have been wondering in relation to this particular Bill to what extent the Minister or Bord na Móna have in mind popularising the use of turf among householders generally. There is a great deal of advertising, including sponsored programmes on the radio, for the use of electricity and it does seem to me to be a pity that since the prejudice against the use of turf was broken down, of necessity, during the war years, greater effort is not being made by Bord na Móna to popularise the use of turf for household purposes.”⁷⁴⁵

GIVES YOU
the of both warmth

convected heat
to heat the farthest corners of the room

radiant heat
from a blazing open fire behind glass



DE LUXE

PEAT BRIQUETTE ROOM HEATER

The revolutionary result of combined fuel research and appliance development, the MONA was designed by the Waterford Foundry in conjunction with Bord na Móna—the first room heater specially designed to burn BNM Peat Briquettes.

Now — another Waterford Foundry first — the sparkling MONA De Luxe! With new streamlined styling. Large full-view fireproof window (all the radiant cheer of an open fire). Up-to-the-minute elegance! Simple, positive heat control.

The MONA warms every part of the room by radiation—the warmth you get from the ordinary open fire—and by setting up a continuous stream of warm air which is heated in its unique “heat exchanger” and penetrates to every corner of the room. Result: wall-to-wall warmth at only a fraction of the cost of open fire heating . . . every scrap of fuel is used to heat the room and is not wasted up the chimney. BNM Peat Briquettes—clean and wonderfully economical to use—are the perfect fuel for the new MONA. No waiting for the room to warm up—the MONA responds rapidly to every adjustment of the control, quickly spreads warmth all over the room even after long periods of idling. So efficient . . . so economical it need never go out from one end of winter to the other! Open the top and there’s a useful hotplate for keeping meals hot . . . Stucco pan simmering . . . plates warm. And when you lift out the ashpan there’s a special cover to prevent ash escaping into the room.

The handsome MONA De Luxe makes itself at home wherever there’s a flue outlet and it can be fitted in most open fireplaces—even where the lintel is very low. With a MONA in two or three rooms you can enjoy real “central heating” comfort without the heavy installation or fuel costs you would normally pay. See the MONA De Luxe Peat Briquette Room heater at your hardware merchant or send the coupon for free literature.

PRICE: £37.10.0
Attractive Hire Purchase terms available

TESTED AND APPROVED BY BORD NA MÓNA

To: WATERFORD IRONFOUNDERS LTD.,
James’s Works, East Wall Road, Dublin 3.

Please send me literature on the
MONA De Luxe Peat Briquette Room Heater.

NAME _____
ADDRESS _____

DESIGNED AND MADE IN IRELAND BY WATERFORD IRONFOUNDERS LIMITED (Proprietors: Massey-Waterford Ironfounders Ltd.)

Figure 4.8 Bord na Móna, ‘Móna de Luxe,’ *Irish Independent*, September 20, 1963.

⁷⁴⁵ J. B. O’Quigley speaking in Houses of the Oireachtas, “Turf Development Bill, 1959—Second and Subsequent Stages. – Seanad Éireann (9th Seanad),” text, March 10, 1959, Ireland,

<https://www.oireachtas.ie/en/debates/debate/seanad/1959-03-10/3>.

In 1963, they developed the *Móna de Luxe* with a more attractive advertising scheme. The new appliance promised “wall-to-wall warmth at only a fraction of the cost of open fire heating [...] every scrap of fuel is used to heat the room and is not wasted up the chimney.”⁷⁴⁶ Critically, the *Móna de Luxe* was designed for use specifically with peat briquettes, the qualities of which, the advert claimed, would facilitate modern and efficient heating and cooking.

As well as appliances for the combustion of the new forms of peat fuel, complementary devices for the carrying bales of briquettes, and cutting briquette straps were also developed. These are shown in figures 4.9 and 4.10.⁷⁴⁷ These objects added to the increasing number of products that were being presented as *essential* for domestic energy consumption.

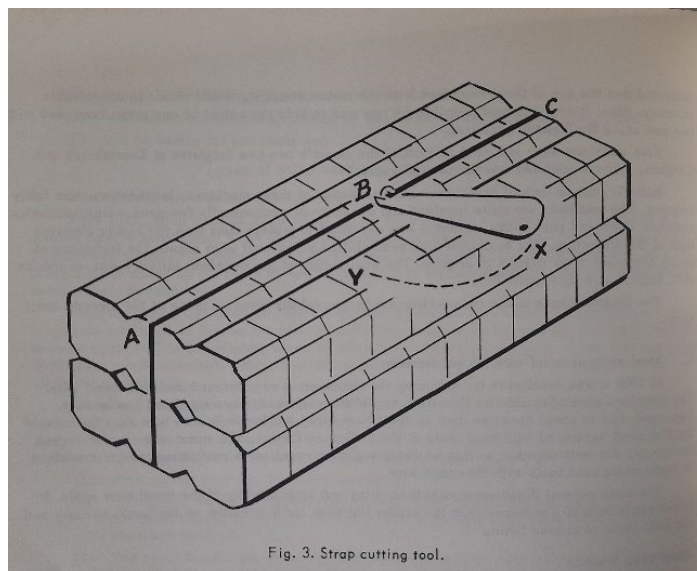


Figure 4.9 “Strap Cutting Tool,” in Miller and Kennedy, “Packaging Briquettes in Ireland for Domestic Use.” (1963), 504.

⁷⁴⁶ Bord na Móna, ‘Móna de Luxe,’ *Irish Independent*, September 20, 1963.

⁷⁴⁷ H. M. S. Miller and D. Kennedy, “Packaging Briquettes in Ireland for Domestic Use,” in *Production, Transportation and Utilization*, vol. 1 (Second International Peat Congress, Leningrad, 1963), 504; and Bord na Móna “Annual Report.” (1962-63), 8.



Figure 4.10 Metal strap-breaker, in Bord na Móna “Annual Report.” (1962-63), 8.

The material impact of the suite of peat products, appliances, and accessories on domestic labour is difficult to identify. Accounts of domestic energy transition in Ireland focus largely on the experiences of women as a consequence of the Rural Electrification Scheme.⁷⁴⁸ It’s clear from the work of historian Sorcha O’Brien that the impacts of electricity were significant. Although, even for those who were able to avail of new appliances and the conveniences which the new modern domestic imaginary provided, the intensity of labour did not lessen, it simply changed. This conclusion mirrors Cowan’s, in that pressures for efficiency and productivity in the domestic sphere captured any time savings from the use of appliances. Certain aspects of work, like the physical labour of fetching water and washing clothes was improved, while more elaborate and intricate expectations of homemakers emerged.⁷⁴⁹ O’Brien cites an oral history interview with Geraldine O’Reilly, a woman from County Monaghan, who recalled the ways her life changed during this period following the introduction of electricity. She said, “... I think we’ve just found

⁷⁴⁸ Sorcha O’Brien, ‘Brown Bread and Washing Machines: Nostalgia and Perspective in Irish Women’s Experiences of Rural Electrification.’ In Harrison Moore and Sandwell, *In a New Light*: 134 - 154; O’Brien, “Electricity, Modernity and Tradition:” 1–18.

⁷⁴⁹ Cowan, *More Work for Mother*.

something else to fill in that time that the machine saves us.”⁷⁵⁰ The new standards put new pressures on women in the home.⁷⁵¹

But there was no immediate or complete transition away from solid fuel. Cooking ranges and stoves, solid fuel boilers and heaters, persisted into the late twentieth century. This reflected the spatial limitations of the process of rural electrification, as well as the levels of income insecurity which persisted in Ireland until at least the 1990s and made peat products the most economic choice for households. Despite the addition of new appliances into the market, according to Horace Miller in a paper delivered at the Second International Peat Congress in 1963, “the open fire is the traditional and most common method of room heating in Ireland.”⁷⁵² Peat in the form of sod peat, machine turf, or briquettes was still a dominant feature of the energy market for domestic consumption and co-existed alongside and through new appliances and technology that were transforming domestic spaces but in ways that were slow and inconsistent from household to household.

VI. The fire persists

The persistence of peat-burning fireplaces and appliances was, in part, related to BNM’s continued invocation of the national cultural associations with peat in their advertising and messaging. With respect to the competition from other energy sources, BNM relied on certain cultural touchstones to remain commercially viable while discarding the historical associations of peat fuel with hard work. This approach dispelled concerns about the inferiority of peat fuel while

⁷⁵⁰ O’Brien, ‘Brown Bread and Washing Machines.’

⁷⁵¹ Clear, *Women of the House*, 210–212.

⁷⁵² H. M. S. Miller, ‘Use of Peat as a Domestic Fuel in Ireland,’ *Second International Peat Symposium* (Leningrad, 1963), 471.

simultaneously invoking the familiar associations of home and hearth. This was evident in a 1953 advertisement featured in the *Evening Herald* newspaper, which combined the imagery of the hearth with which sod peat had been associated for generations with new messaging about modernity and the benefits of briquettes as a clean domestic fuel.⁷⁵³ The ad highlighted how burning briquettes aided in domestic tasks such as laundry and heating, as well as emphasising their neatness and cleanliness.

Another BNM advertisement from 1959, this time for machine turf, described the materiality of this new form of peat as superior to other fuels. The advert was informing consumers of the technicalities of the “reactivity” of machine turf alongside the image of a burning fire on an autumn night.⁷⁵⁴ This combination of new technical language with familiar and comforting symbols of the hearth was an effective advertising strategy.

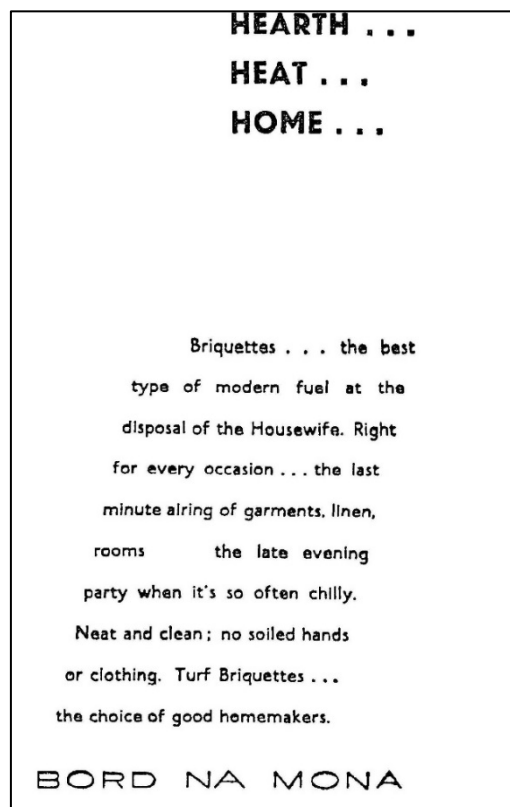


Figure 4.11 “Hearth, heat, home,” Bord na Móna advertisement, in *Evening Herald*, September 4, 1953.

⁷⁵³ “Hearth, Heat, Home,” *Evening Herald*, September 4, 1953.

⁷⁵⁴ “Quick Starting for Autumn Fires,” *Offaly Independent*, October 10, 1959.

QUICK STARTING FOR AUTUMN FIRES



Machine Turf is the fuel for
Autumn evenings. Within ten minutes
a few sods properly set
will produce a comfortable glowing fire.
The rapidity with which any
fuel ignites is known technically as its
reactivity and Machine Turf has been
proved to be one of the most
reactive of fuels. Don't spoil your evenings
waiting for your fire to brighten.

USE MACHINE TURF

Enquiries to your local fuel merchant or to
Bord na Móna, 28-32 Upper Pembroke Street, Dublin

MACHINE TURF	COAL	BRIQUETTES
BEST QUALITY HOUSE COAL—Free from Slack. £8 per Ton Delivered. Special Price for 8/10s. Lots or Oms.	LOOSE BRIQUETTES—£8 10s. 0d. per Ton Delivered. Very Limited Quantities Available.	
MACHINE TURF—Delivered in Handy 3-ton Lots at £4 per Ton. Special Price for Sales Lots or Over. Orders now while prices are low and supplies are freely available.		
CENTRAL HOME STORES PATRICK STREET, DUBLIN Phone 18		

Figure 4.12 “Quick starting for Autumn fires” Bord na Móna advertisement in *Offaly Independent*, October 10, 1959

Historian Lynda Nead demonstrates a similar phenomenon in Britain in the post-war era.⁷⁵⁵ She shows that despite the increased availability of electric heating appliances, as well as concerns over the effects of smoke pollution, the coal fire persisted in British homes. She argues that part of the reason for this was a widespread belief that “the coal fire was the heart of the family

⁷⁵⁵ Lynda Nead, “As Snug as a Bug in a Rug’: Post-War Housing, Homes and Coal Fires,” *Science Museum Group Journal* 9, no. 9 (January 31, 2023), <https://doi.org/10.15180/180902>.

home and was the source of physical and spiritual sustenance; in the context of the war it also stood for the defended nation.”⁷⁵⁶ The symbolic function of the fire that linked fuel consumption with ideas of the nation permeated the visual culture of the post-war era in Britain.

In Ireland, newspaper advertising helped to construct a sense of the modern Irish home in the rural context and the value of this as part of a new national identity. These energy narratives focused on the value of the consumers’ choices for national development. In a BNM advertisement featured in the *Anglo-Celt* in 1959, the consumption of machine turf was framed as a way to “help the nation.”⁷⁵⁷ This advert was promoting a BNM exhibition, which was a common feature of the post-war era, showcasing the benefits of consuming new forms of peat in the home and their value as modern domestic fuels. While attendance at these exhibitions was limited to those who could afford it, images of the events were reproduced and presented in national newspapers and women’s journals.⁷⁵⁸ The domestic consumption of peat was linked to the national ‘mission’ of peat extraction within a wider geography of energy.

From the 1960s onwards, BNM appealed to consumers by situating peat fuel within comfortable associations of a typical Irish home. For example, an advertisement in the *Irish Press* in 1961 read, “for those who enjoy basking in front of a good fire ... for those who are connoisseurs of comfort ... the fuel is briquettes.”⁷⁵⁹ The cosy warmth of a briquette fire was here imagined as part of a domestic experience where leisure and the time to bask in front of the fire featured. This was similarly evident in an advert from 1967, shown in figure 4.13, which incorporated images of family life centred around the fire within the instantly recognisable shape

⁷⁵⁶ Nead.

⁷⁵⁷ “Burn Machine Turf and Help the Nation,” *Anglo-Celt*, October 3, 1959.

⁷⁵⁸ O’Brien describes the reproduction of images and information about a 1957 ESB model kitchen, which featured in national media and *The Irish Countrywoman*. In O’Brien, “Electricity, Modernity and Tradition,” 11.

⁷⁵⁹ Bord na Móna, “Connoisseur of Comfort,” *Irish Press*, November 10, 1961.

of the peat briquette.⁷⁶⁰ In the advert, the fire is imagined to be a source of relaxation after a day's work outside the home.



Figure 4.13 Bord na Móna advertisement for Peat Briquettes in *Evening Herald*, October 17, 1967.

In the 1960s, representations of Irish home life reflected the juxtaposition of new technologies of consumption and modern design elements with the continued presence of the fire. This was evident in a film produced by the ESB in 1968 called *Power for Tomorrow*.⁷⁶¹ The film presents images of a rapidly modernising Ireland as a consequence of electric power. These

⁷⁶⁰ Bord na Móna, "Peat Briquettes," *Evening Herald*, October 17, 1967.

⁷⁶¹ "Power for Tomorrow," ESB (1968). ESB Archives, Accessed June 26, 2024.

<https://esbarchives.ie/2018/11/14/power-for-tomorrow-1968/>

transformations were shown to be occurring in medicine, transport and infrastructure. The value of new electric appliances was demonstrated in a section of the film that discussed the domestic sphere. The addition of televisions was part of this transformation. However, in a still from the film, shown below, even the addition of the television was presented alongside a range burning solid fuel, presumably peat although this is difficult to confirm. This living room was still typical of the Irish domestic sphere. This image demonstrates the partial and non-linear progression of modern developments within Irish homes where solid fuel consumption prevailed despite access to electric power.



Figure 4.14 *Power for Tomorrow*, ESB (1968)

Bord Fáilte images from 1969 highlighted the amalgamation of contemporary design with more traditional modes of energy consumption. This is clear in figures 4.14 and 4.15.⁷⁶² These

⁷⁶² Fáilte Ireland. *Fireplace*. Digital Repository of Ireland (2020). Dublin City Library and Archive. <https://doi.org/10.7486/DRI.3b59dr60m> (Accessed: 2023/04/25); Fáilte Ireland. *Fireplace*. Digital Repository of Ireland (2020). Dublin City Library and Archive. <https://doi.org/10.7486/DRI.xg94x551j> (Accessed: 2023/04/25).

promotional photographs for the Irish tourist industry show contemporary design features, a stone wall hearth and women in typical 1960s fashion. The fireplace was still central to the domestic living space, and peat was being burned in this fire. The cultural and social practices of gathering around the fire still existed as considerations in the design of the space. But the women in these images are primarily engaging in leisure. They are sitting together and having a drink. In the image where the woman is tending the fire, she is casually stoking it, with no indication that this was a difficult or laborious task. These images of domestic life in the end of the 1960s bore little resemblance to the still prevalent working kitchen/living spaces of rural Irish cottages.



Figure 4.15 "Fireplace," Fáilte Ireland Tourism Photographic Collection, (1969)



Figure 4.16 "Fireplace," Fáilte Ireland Tourism Photographic Collection, (1969)

Considering the out-sourcing of many of the tasks associated with the open fire to electricity or stoves, BNM had to reposition peat within its traditional heritage. The increasing use of televisions by Irish consumers was ironically useful in this regard. This is clear in a statement in 1970 in *Scéal na Móna*, the BNM workers' periodical. It read,

“the biggest news on the briquette sales front is the completion of two new T.V. commercials, 45 seconds and 15 seconds. They are currently being shown on RTE and UTV and receiving very favourable comments. Their aim is to highlight the convenience and quality of briquettes together with their place as the traditional fuel for the home.”⁷⁶³

This clear objective within the marketing strategy of the Board was for a reinvocation of the historical associations with peat fuel in the mind of the Irish consumer, although with the hand-won sod replaced by briquettes. In another BNM print advert from 1973, the complexity of this narrative was clear.⁷⁶⁴ On the one hand, the modern attributes of briquettes were foregrounded. This modernity was deftly weaved within claims of the historical cultural associations with peat fuel usage, and the hearth. The advert claimed, “the hearth is still the focal point of Irish homes and not even the advent of central heating can destroy our addiction to the traditional open fire.”⁷⁶⁵ The advert went on to claim, “in producing peat briquettes Bord na Móna has succeeded in converting the traditional qualities of turf – rapid kindling, penetrating warmth and a lively blaze – into a highly modern fuel.”⁷⁶⁶ In its closing statement, the advert called peat briquettes “the traditional fuel for today.” This was a departure from the Board's earlier assertions that peat was the ‘fuel of tomorrow.’ This demonstrated an advertising strategy that considered focussing on and invoking the historical associations with peat to be most effective in an increasingly competitive domestic fuel market.

⁷⁶³ “Briquette News,” *Scéal Na Mona* (Nov. Dec. 1970), 5. UCDA P91/50.

⁷⁶⁴ “Peat Briquettes for Genuine Home Comfort,” *Irish Independent*, September 20, 1973.

⁷⁶⁵ Ibid.

⁷⁶⁶ Ibid.

While the industry had effectively incorporated the demands of consumers and the realities of the modernising domestic sphere into the design of peat products and appliances, the most effective strategy for BNM remained the longer association of peat fuel with the Irish nation.

VII. Coda – necessity and nostalgia

When Irish musician John Sheahan, of The Dubliners, composed *The Marino Waltz* in 1983, he couldn't have imagined the lasting impact his tune would have. In 1986, BNM utilised this waltz in a 30 second TV advertisement for peat briquettes.⁷⁶⁷ This advert would play on Irish television until the late 1990s and remains in the national consciousness. In the advert, a glowing briquette fire illuminates children playing, people waltzing together, someone taking off their shoes, a woman lying on the ground on the phone. These incongruous scenes represented intimate moments between family members, partners, parents and children – familiar domestic scenes in 1980s Ireland. Besides the image of an unknown figure cutting a bale of briquettes and tossing two into the fire, work is entirely absent from this advert. The previous associations of the open fire with back-breaking labour and constant maintenance have no place in this advert. Rather, the advert uses the symbolic associations of the fire with comfort, security, and family life. Scoring the advert with the Irish waltz played on the fiddle implied continuity with the traditional, Irish heritage.

In 1987, an article in *Scéal na Móna* featured excerpts from 'fan mail' that had been submitted by members of the public who had enjoyed the advert. One such submission came from Derek O'Beirne who wrote, "the advertisement brings back a flood of happy childhood memories in my grandmother's home – two briquettes and two sods of turf were added to the dying embers

⁷⁶⁷ "The Marino Waltz," *Bord na Móna*. 1986.

https://www.youtube.com/watch?v=yVJb3yGD7yA&ab_channel=CR%27sVideoVaults

‘just to keep the fire for the morning.’”⁷⁶⁸ O’Beirne’s childhood nostalgia mirrors Macdara Woods’ reflections from the beginning of this chapter. The memory of work. The memory of women’s household labour continued to play a powerful role in people’s feelings about peat fuel.

In 1990, peat was still the most consumed domestic fuel, accounting for approximately 32% of the total share of final consumption.⁷⁶⁹ Briquettes contributed almost 7% of this. From this point onwards however, oil, natural gas, and electricity became increasingly more dominant as energy sources in Irish homes. This reflected the economic growth experienced in Ireland at that time. Increased housing developments and construction from the 1990s onwards incorporated central heating as standard. This led to a more rapid transition away from the use of peat in the home. Mirroring the strategies of the previous almost 40 years, Bord na Móna’s response to these changes continued to invoke the historical place of peat as a fuel for the nation. This is clear in an advertisement from 1995. It read, “Bord na Móna Peat Briquettes have always been associated with the warmth and homeliness of an open fire. The open briquette fire is as much a feature of Irish Life as music, dance and storytelling.”⁷⁷⁰

⁷⁶⁸ “TV Commercial Is a Hit,” *Scéal Na Mona* Vol. 3, no.3 (1987), 3.

⁷⁶⁹ Martin Howley et al., “Energy in Ireland - 1990 - 2011” (Dublin: Sustainable Energy Authority of Ireland, 2012), 74.

⁷⁷⁰ “Bord Na Móna Peat Briquettes Fireside Fables,” *Leinster Express*, March 25, 1995.

Chapter Five

“When the turf has gone”

Contested Peatland Futures

I. Introduction

“Peatlands are not, in and of themselves, regarded as areas of high amenity value, and even the country-lover, who sings the praises of the open rolling moorland, rarely finds the saturated peat blanket an attraction. Thus, the normal criterion used to convince official bodies that the conservation of large areas is justified, is of limited use when applied to mires. The case for conservation of peatlands must, therefore, be argued principally on scientific grounds.”⁷⁷¹

This statement articulated the fundamental challenge facing peatland conservationists in the 1970s. The authors, ecologists David Bellamy and Tom Pritchard, acknowledged the pervasive belief that peatlands were value-less when not being exploited. These ecosystems, which had historically been considered wastelands and low value environments, could therefore not be measured using the same metrics as other kinds of landscapes. According to Bellamy and Pritchard, their worthiness for conservation, had to be framed in scientific terms.

⁷⁷¹ David Bellamy and Tom Pritchard, “Project ‘Telma’: A Scientific Framework for Conserving the World’s Peatlands,” *Biological Conservation* 5, no. 1 (1973), 35.

Scientific research had been a crucial component in the production of the peatland resource imaginary. Since the Bogs Commission in the early nineteenth century, knowledge of the physical properties and processes of peatlands were crucial for extraction and other human interventions. But the emergence of peatland ecology, while deeply entangled with the peat industry, significantly reframed understandings of the impact of human activity on peatlands. Peatland ecologists made visible the negative consequences of human exploitation and subsequently advocated for their protection within a new paradigm of peatland valuation.

This chapter traces the contributions of peatland ecologists to understandings of peat as a natural resource. They underscored peatlands' value as locally, regionally, and globally significant ecosystems. This changing attitude developed within the context of continued extraction and industrial development of bogs, the globalisation of scientific and industrial research, and the internationalisation of environmental governance. The chapter shows that although peatlands were increasingly appreciated for more than their economic value, they continued to be understood within a national imperative for extraction, as well as a post-extractive agricultural imaginary.

Knowledge feedback loops between industry and ecology in Ireland informed ways of thinking about the conservation of peatlands. As extraction transformed peatlands, and cutaway bog became the dominant iteration of peat landscapes, new imaginaries and ways of dealing with these landscapes had to be produced. These imaginaries were increasingly informed by ecology but still subject to economic pressures. The imperative for energy production continued alongside new imperatives for agricultural reclamation of cutaway bog and the conservation of intact peatlands. By making these interdependencies visible, this chapter enhances understandings of the history of Irish environmental governance by making visible the complex entanglements between industry, agriculture, and ecology.

The governing mechanisms within these competing peatland imaginaries necessitate an approach that considers the multiple stakeholders involved. These include natural scientists, international industrial organisations, international environmental organisations, the state, Bord na Móna, and the public. Peatland ecology operated within academic institutions like Irish and

international universities, as well as the Royal Irish Academy which platformed ecological research. Scientific publications created by these institutions provide valuable evidence in this regard. Significant contributions to the field of peatland ecology also came from within industry. In 1946, through the Turf Development Act, Bord na Móna established an Experimental Station in Newbridge, part of which included a Classification and Field Studies Department.⁷⁷² This research centre was, according to the legislation, intended “for the purpose of improving the production of turf and turf products” and to “conduct experiments and research as it thinks fit.”⁷⁷³ Despite this obvious industrial function, the Classification and Field Studies Department conducted field work and ecological surveys which significantly contributed to scientific understandings of peatlands.⁷⁷⁴ Their publications are analysed throughout this chapter.

Furthermore, although primarily an organisation for industrial collaboration, the International Peat Society (1968) provided an international platform for the dissemination of ecological research.⁷⁷⁵ The proceedings of International Peat Congresses provide further insights into the perspectives of a unique cohort of peatland stakeholders, that is, the scientific community. And while this research contributed to new meanings about the value of peatlands, it was also often informed by the industrial imperatives. The proceedings of these Congresses are a valuable lens for tracing the changing discourses within the international peatland community.

This chapter argues that peatland ecology emerged within and through the extractive imperatives of industry. It furthermore demonstrates that the increasing recognition of ecological knowledge and expertise bolstered competing and conflicting visions of peatland futures. Finally, it

⁷⁷² Turf Development Act, 1946.

<https://www.irishstatutebook.ie/eli/1946/act/10/enacted/en/html?q=turf+development&years=1946>

⁷⁷³ Turf Development Act, 1946.

<https://www.irishstatutebook.ie/eli/1946/act/10/enacted/en/html?q=turf+development&years=1946>

⁷⁷⁴ Bord na Móna Peat Research Centre, ed., *From Boot and Saddle to Biotechnology: On the Newbridge Barrack Site* (Newbridge, Co. Kildare: Bord na Móna Peat Research Centre, 1991): 67.

⁷⁷⁵ Eino Lappalainen et al., eds., *Global Peat Resources* (Jyskä: International Peat Society, 1996), 7.

shows that the emergence of multiple meanings about the best-use for peat landscapes catalysed an increasingly multi-stakeholder consultation process for the governance of peatlands, although this system of governance replicated existing power dynamics and primarily facilitated the continued exploitation of peatlands.

II. Peatland knowledge – continuity and change

As Chapter One demonstrates, peatlands were subject to a long history of human valuation and knowledge production. Within these understandings, bogs assumed multiple materialities. They could be wilderness, pasture, forest, or mines. In the case of extraction, beliefs about abundance and reclamation underlay the actions of the peat industry. These beliefs related directly to the material properties of peatlands and their essential organic components, which could be manipulated through human intervention in order to satisfy the needs of various stakeholders at various times. It was a mindset in which future-thinking was essential, but this future exclusively concerned exploitation and productivity.

Belief in the abundance of Ireland's peatlands informed the actions of imperial and government actors alike. Of course, this optimism associated with abundant fossil fuels was not unique. Considering the historical booms in coal and oil production respectively, they were also marked by a sense of unlimited and infinite energy for consumption.⁷⁷⁶ As historian Emma Wrigley argues in the case of English coal, this sense of abundance was curbed by an acknowledgement of the finiteness of coal.⁷⁷⁷ From the Jevon's paradox in 1865 to the Club of Rome's *Limits to Growth* in

⁷⁷⁶ Sieferle, *The Subterranean Forest*; and Daniel Yergin, *The Prize: The Epic Quest for Oil, Money, and Power* (New York: Simon & Schuster, 1991).

⁷⁷⁷ E. A. Wrigley, *Energy and the English Industrial Revolution* (Cambridge; New York: Cambridge University Press, 2010), 50.

1972, the threat of the inevitable exhaustion of coal fields and oil wells underlay all fossil economies.⁷⁷⁸ In the history of large-scale peat extraction however, peat's materiality as somehow both fossil *and* organic extended its abundance beyond geographical limitations. From the improvement discourse of the nineteenth century to the post-war Bord na Móna expansion, reclamation as a post-extractive future for bogs was at the centre of all development projects.

Reclamation involved the drainage of intact peatlands for agricultural production and forestry, or the transformation of cutaway bog to fertile land. This practice formed the basis of enquiry for the Bogs Commission.⁷⁷⁹ Reclaimed peatlands became *organic* productive landscapes. This post-use potential for agriculture and forestry in theory extended the extractive limits of peat bogs. The new systems of extraction which were transplanted onto them (or not) inherited the economic logics of these industries. The potential future use for drained and cutaway peatlands extended the abundance mindset associated with their commercial use far beyond the geographical limitations of their surface area and depth. The challenge for peatland ecologists, then, was overcoming these assumptions and identifying and publicising the ways in which peat *was* finite, as well as the limitations and environmental consequences of reclamation practices.

In discussing the origins of the field of ecology, historians Paul Warde, Libby Robin, and Sverker Sörlin detail the significance of the concept of the *ecosystem*.⁷⁸⁰ Emerging from botany and zoology in the interwar period, this scientific concept, they argue, enabled an emergent multidimensional view of the interactions and interdependencies between species and habitats for scientists at the time. Critically, as a concept and a methodological tool, it also dismantled previous

⁷⁷⁸ W. Stanley Jevons, *The Coal Question: An inquiry concerning the progress of the Nation, and the probable exhaustion of our coal-mines* (London: Macmillan and Co., 1865); and Donella H. Meadows and Club of Rome, eds., *The Limits to Growth: A Report for the Club of Rome's Project on the Predicament of Mankind* (New York: Universe Books, 1972).

⁷⁷⁹ See Chapter One.

⁷⁸⁰ Paul Warde, Libby Robin, and Sverker Sörlin, *The Environment: A History of the Idea* (Baltimore: Johns Hopkins University Press, 2018), 82–85.

notions of a hard boundary between humans and nature. It instead called for a critical examination of the impacts of human activity on biological processes. One of the key figures that Warde et al. identify within this growing discipling was Arthur Tansley, a botanist working at Cambridge University. In a 1935 paper he coined the term ecosystem and developed a systems approach to thinking about the non-human environment. Within his view, nature was composed of complex systems that influence and are influenced by their organic components and biomes.⁷⁸¹ He was an influential figure in the nascent bog ecology field in Ireland.

Tansley's position on humans' relationship to nature was a crucial contribution to the natural sciences in the 1930s. On this subject, he wrote, "[when] regarded as an exceptionally powerful biotic factor which increasingly upsets the equilibrium of preexisting ecosystems and eventually destroys them, at the same time forming new ones of a very different nature, human activity finds its proper place in ecology."⁷⁸² This idea of an ecological equilibrium was particularly salient in thinking about peatlands and practices of extraction. From the beginning, ecology was concerned with plant and animal organisms, energy and nutrient flows, their environments, and the impact of human activity on these natural systems.

Ecosystems thinking was applied in Ireland by botanist Robert Lloyd Praeger, who served as president of the Royal Irish Academy from 1931 to 1934. Praeger contributed significantly to the field of botany in Ireland.⁷⁸³ An advocate of the value of scientific field work, in an address to the Royal Irish Academy in 1932, he claimed that "our knowledge of the recent history of the globe and of our own area, whether meteorological, geological, zoological or botanical, is still most incomplete, and that it behoves us to therefore be restrained in our pronouncements and active in

⁷⁸¹ Arthur G. Tansley, "The Use and Abuse of Vegetational Concepts and Terms," *Ecology* 16, no. 3 (1935): 284–307.

⁷⁸² Tansley, 303.

⁷⁸³ Timothy Collins, "Robert Lloyd Praeger." In Charles Mollan and Royal Irish Academy, eds., *Irish Innovators in Science and Technology* (Dublin: Royal Irish Academy, 2002), 196–197.

further research.”⁷⁸⁴ As well as overall calls for more ecological research in Ireland, he specifically encouraged research into the botany of Ireland’s peatlands. He had undertaken botanical research in the early twentieth century on peatlands in the Dublin and Wicklow mountains.⁷⁸⁵ The wider field of ecology in the 1930s was devoting increasing attention to peatlands, with Arthur Tansley in 1939, formulating an influential system of classification of peatland types.⁷⁸⁶ This classification specifically isolated blanket bogs from raised bogs, as well as more nuanced sub-categories of these types.

Inspired by the evidence of deteriorating ecosystems that he had observed, Praeger was a founding member of An Taisce, the Irish Heritage Trust, in 1948. This organisation attempted to bridge a contemporary gap in legislation by advocating and investing in the protection of the built and natural heritage of Ireland. Sociologist Liam Leonard argues that the history of what constituted as heritage and what was worthy of conservation in Ireland is complex.⁷⁸⁷ Ideas of heritage were historically informed by resentment towards the colonial built environment, as well as a tension between desires to rapidly industrialise alongside an overall belief in the relatively unspoiled nature of Ireland’s countryside.⁷⁸⁸ Despite these tensions, An Taisce was successful in

⁷⁸⁴ R. Lloyd Praeger, “Recent Views Bearing on the Problem of the Irish Flora and Fauna. An Address Delivered before the Academy,” *Proceedings of the Royal Irish Academy, Section B: Biological, Geological, and Chemical Science* 41 (1933-1932), 142.

⁷⁸⁵ George H. Pethybridge and R. Lloyd Praeger, “The Vegetation of the District Lying South of Dublin,” *Proceedings of the Royal Irish Academy, Section B: Biological, Geological, and Chemical Science* 25 (1905 1904): 124–80.

⁷⁸⁶ Arthur G. Tansley, *The British Isles and Their Vegetation*, Reprint (Cambridge: Cambridge University Press, 1965).

⁷⁸⁷ Liam Leonard, ed., *The Sustainable Nation: Politics, Economy and Justice*, First edition, *Advances in Sustainability and Environmental Justice*, volume 21 (Bingley: Emerald Publishing Limited, 2018), 13–16.

⁷⁸⁸ Leonard, 13–16.

establishing a discourse around the need to protect parts of the non-human environment that it considered valuable. While considerations of the built heritage of Ireland had to contend with the legacies of colonial architecture, natural heritage was prioritised largely based on aesthetic factors.

There was a limited political discourse in post-independence Ireland for the protection of the non-human environment.⁷⁸⁹ The most significant attempts at anything resembling nature protection were expressed in the form of legislation related to the preservation of game and birds.⁷⁹⁰ The Wild Birds Protection Act in particular was an attempt by policy makers to adapt and improve pre-existing British law into the Irish legal system.⁷⁹¹ Debate surrounding this Bill focussed on the cruelty associated with the capture and imprisonment of wild birds.⁷⁹² The scope of this legislation indicated the primary objectives of the early nature protection discourse in post-colonial Ireland. These were the preservation of species either for hunting or posterity.

Peatland ecology, then, emerged within a context of deeply embedded beliefs about the productive potentialities of peatlands, as articulated through industrial discourses, as well as a limited national discourse about the protection of nature. As well as this, as Chapter One makes clear, the nationalist and developmental tone of the publicity and rhetoric surrounding the

⁷⁸⁹ Bernadette Connaughton, “The Politics of Environmental Policy,” in *Europeanisation and New Patterns of Governance in Ireland*, by Nicholas Rees, Bríd Quinn, and Bernadette Connaughton (Manchester; New York: Manchester University Press, 2009), 123-125.

⁷⁹⁰ Game Preservation Act, 1930.
<https://www.irishstatutebook.ie/eli/1930/act/11/enacted/en/html?q=game&years=1930>; Wild Birds Protection Act, 1930.

<https://www.irishstatutebook.ie/eli/1930/act/16/enacted/en/html?q=wild+birds&years=1930>.

⁷⁹¹ Wild Birds Protection Act, 1930.

⁷⁹² Houses of the Oireachtas, “Wild Birds Protection Bill, 1929—Second Stage. – Seanad Éireann (1928 Seanad),” text, November 27, 1929, Ireland. <https://www.oireachtas.ie/en/debates/debate/seanad/1929-11-27/13>.

establishment of the peat industry in the 1930s and 1940s meant that peatlands were singularly considered as sites of extraction.

III. Expanding industry and ecology

The TDB had relied on materials produced by the Bogs Commission and the British Fuel Research Board when making its early inroads into the peatlands. These materials were insufficient to address the needs of the growing industry. In order to implement the First and Second Development Programmes, Bord na Móna required contemporary data and analysis in order to manage the expansion of extraction.⁷⁹³ The Peat Research Centre was established to generate this data.

Beyond the expansion imperative, there was also a growing concern about the future-use of cutaway bogs. Utilising this cutaway for agriculture or forestry could provide an economic advantage to the peat extraction process and this potential was invoked to justify primary investments, and the viability of the industry overall. This was articulated in 1954 by C. S. Andrews,

“up to the present Bord na Móna has not concerned itself with the ultimate use of the cutaway but it is an integral part of the Board’s operations to leave the cutaway drained and fit for forestry or cultivation. It should be noted that when all the fuel is cut out the drained and cultivable cutaway will be available at no cost as the capital investment will have been amortized and the advances repaid to the Government.”⁷⁹⁴

⁷⁹³ See Chapter Two on the objectives of these programmes.

⁷⁹⁴ C. S. Andrews, “Some Precursors of Bord Na Móna,” *Statistics and Social Inquiry Society of Ireland*, 1954, 139.

In this way, Andrews presented a vision of future fertile land that could be easily and economically absorbed into agricultural production or forestry.

But the Board's transition to milled peat in the 1950s presented a suite of new challenges for cutaway development. The consequences of this method of extraction in the Irish context were unknown. This uncertainty was clear in chief engineer Michael Maguire's 1949 report on the introduction of the milled peat system in Boora.⁷⁹⁵ In the report, discussing the advantages and disadvantages of the system, Maguire presented two competing claims. Firstly, he claimed, "on exhaustion of the bog, the cutaway is left in a flat orderly condition, with drains, without any major capital expenditure having to be incurred."⁷⁹⁶ Maguire was describing a rationalised and improved post-extractive landscape, suggesting that future use for afforestation or agriculture should be a relatively straightforward process. On the next page, however, he wrote of a "claimed difficulty of recovering cutaway for land or afforestation purpose in the black peat remaining at end of working life of bog."⁷⁹⁷ Maguire had no evidence to support his earlier claim, and in fact, there was limited information or research on the impacts of milled peat extraction. These contradictory statements spoke to the reality that actors within the structures of BNM simply did not know enough about the post-use of milled peat bogs but continued with this method of extraction regardless.

Peatland ecology evolved within these extractive imperatives. The Board required scientific knowledge to facilitate development, and the changing peat landscape required research into its potential of cutaway for reclamation. Speaking at the 1954 International Peat Congress in Dublin, G. F. "Frank" Mitchell, a geologist based at Trinity College Dublin who would later hold the presidency of the Royal Irish Academy, stated that,

⁷⁹⁵ Michael Maguire, "Consideration for the Adoption of Milled Peat System for Boora Group of Bogs." (Newbridge: Bord na Móna, 1949), UCDA P91/42.

⁷⁹⁶ Maguire, 4.

⁷⁹⁷ Maguire, 5.

“we are dealing with a substance which has an ultimate botanical origin. Wherever we find peat or whatever sort of peat it is, it has a botanical origin and therefore I think we cannot overlook the botanical ingredients which are entrapped in it. We can regard the bog, if we like, as a recent geological deposit; we can regard it as a challenge to our engineering skill to remove it and turn it into fuel as economically as possible, but I do think that we ought to find out information about it in the process if only to hand this information on to posterity.”⁷⁹⁸

His statement reflected the multiple values ascribed to peatlands. He further demonstrated the concerns of the growing community of peatland scientists in post-war Ireland, who were building on the work of Tansley and Praeger. The material properties of peatlands presented challenges to economic extraction and usage. But, as a scientist, Mitchell advocated for the value of scientific research for its own sake and the production of this knowledge for posterity. His remark revealed the entanglement between ecology and industry during this period. The production of ecological knowledge about the bogs was embedded within a wider discourse about extraction and economy.

Indeed, the relationship between ecology and industry was often foregrounded in the rhetoric of ecologists. Also speaking at the 1954 Congress, Rev. J. J. Moore, a UCD-based botanist, claimed that “any increase in our knowledge of these complicated units – our bogs – should surely lead to a more rational and profitable use of their riches.”⁷⁹⁹ Moore presented scientific research as a tool for industrial development. Considering the costs associated with field work and surveying, this framing perhaps also reflected the desire of these scientists for legitimacy and investment.

The leading figures in the nascent bog ecology field at the time included Rev. Moore and Frank Mitchell, as well as David Bellamy, an English botanist based at Durham University and Tom Barry, a former British forestry worker tasked with managing the Classifications and Field

⁷⁹⁸ G. F. Mitchell, “Discussions,” in *B. Classifications*, (International Peat Symposium, Dublin, 1954), 27–28.

⁷⁹⁹ Rev. J. J. Moore, “Irish Bog Ecology: Its Role and Development,” in *BI. Survey Methods* (International Peat Symposium, Dublin, 1954), 2.

Work division of the BNM experimental station. Tom Barry's contribution to the conservation movement in Ireland was significant. As Feehan and O'Donovan describe, he "brought a new environmental awareness to Bord na Móna."⁸⁰⁰ These scientists, although operating within and through the parameters of the peat industry, contributed to a body of work which established a new way of understanding peatlands as complex ecosystems governed by the relationships between hydrology, geology, flora, fauna, climate, and humans.

The classification of peatlands formed a large part of ecological study in the post-war period. For botanists, part of this task involved examining surface vegetation to identify and distinguish different peatland types.⁸⁰¹ This vegetation included various varieties of sphagnum mosses, as well as bog rush, heath, and heather. Different regional methods of classification were utilised during this period, however the European Braun-Blanquet system was typically applied in the Irish case.⁸⁰² According to Moore, this system "consist[ed] of the accumulation of plant lists from various stations, each species being given a numerical status. Species' lists are then analysed statistically, and regularly recurring combinations are given the status of communities."⁸⁰³ This mathematical system of analysis allowed Moore and his peers to observe the recurring or sporadic instances of plant communities in peatlands. Within this system, raised bogs, blanket bogs, and

⁸⁰⁰ Feehan and O'Donovan, *The Bogs of Ireland*, 480.

⁸⁰¹ For example, on the vegetation of raised bogs see M. E. S. Morrison, "The Ecology of a Raised Bog in Co. Tyrone, Northern Ireland," *Proceedings of the Royal Irish Academy, Section B: Biological, Geological, and Chemical Science* 60 (1960-1959): 291–308; and David Bellamy and Rosemary Bellamy, "An Ecological Approach to the Classification of the Lowland Mires of Ireland," *Proceedings of the Royal Irish Academy, Section B: Biological, Geological, and Chemical Science* 65 (1967-1966): 237–51. On the vegetation of 'mixed' bogs see D. J. Boatman, "The Relationships of Some Bog Communities in Western Galway," *Proceedings of the Royal Irish Academy, Section B: Biological, Geological, and Chemical Science* 61 (1961-1960): 141–66. On the vegetation of blanket bogs see Bellamy and Bellamy.

⁸⁰² Moore, "Irish Bog Ecology," 2.

⁸⁰³ Moore, "Irish Bog Ecology," 2.

fens were distinguished by their plant communities. The adoption of the Braun-Blanquet system also facilitated collaboration and research exchange with European ecologists.

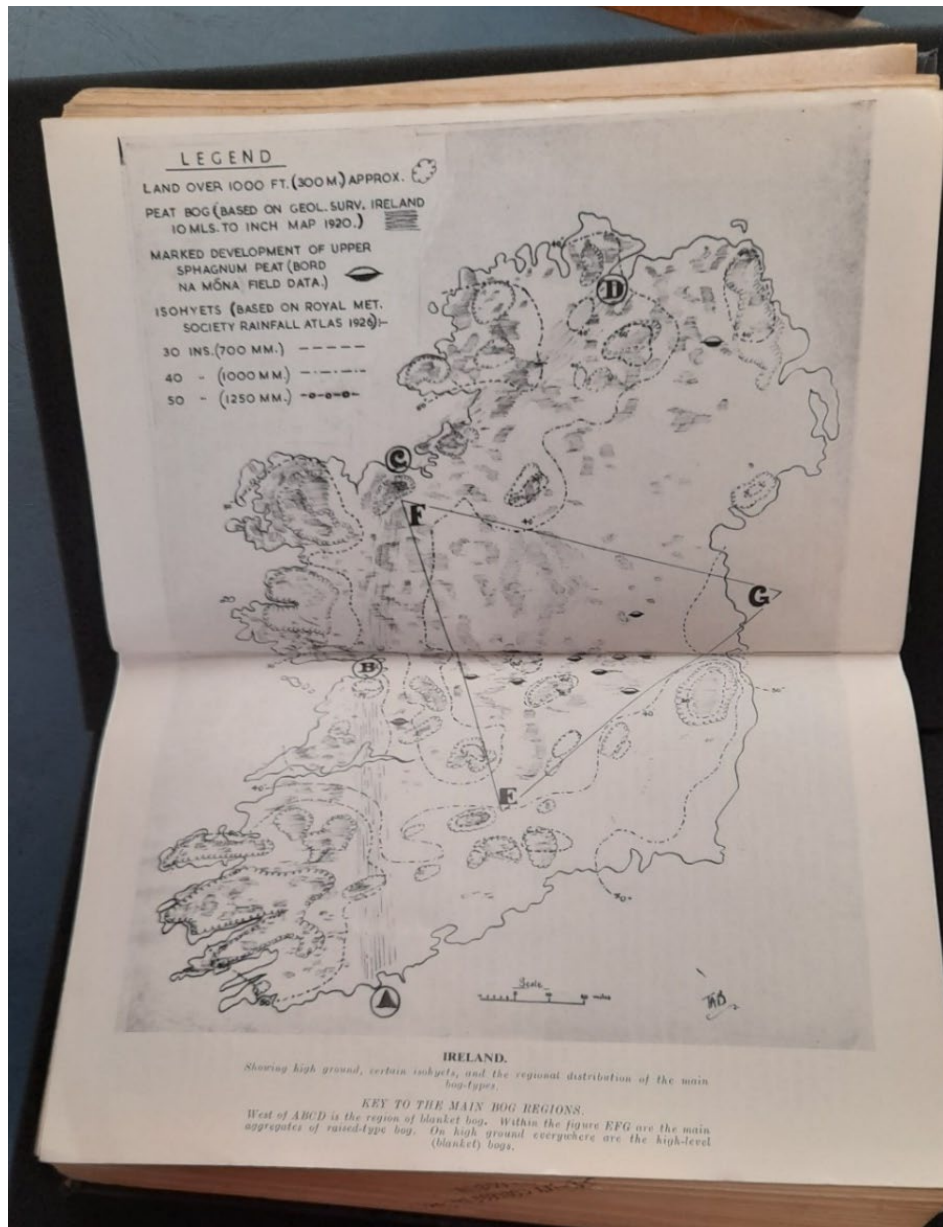


Figure 5.1 Distribution of raised and blanket bogs in T. A. Barry, "Some Considerations Affecting the Classification of the Bogs of Ireland, and Their Peats," 10-11.

Peatland types were further categorised based on the climatic conditions influencing their formation. Figure 5.1 shows a map of Ireland presented by Tom Barry at the 1954 Peat Congress.⁸⁰⁴ The map indicates the broad regional distinction between raised bogs and blanket bogs, and the average rainfall and gradient variations between these different regions. Barry outlined the potential challenges for extraction based on these factors which included different water contents, chemical composition, and access, particularly on the blanket bogs in the west of Ireland.⁸⁰⁵

Ecologists assessed the formation of peatlands using hydrological and climate conditions with the distinction between ombrotrophic and minerotrophic formations of peatlands factored into these classifications. Through the accumulation of this research on the formation of peatlands, ecologists developed a framework for understanding the regeneration of bogs.⁸⁰⁶ According to botanists D. Walker and P. M. Walker, “the regeneration complex” was the process by which the growth of peat within a peatland happened through the interaction of specific internal conditions and external factors.⁸⁰⁷ Internal conditions included the gradient of the bog, the depth and type of peat, plant life and microtopography. External factors included precipitation, wind, and insulating factors like geological formations and plant cover. This knowledge on peatland regeneration, particularly as it pertained to the deep history of peatland formation, was significant in demonstrating the relative finiteness of the bogs. The length of time it took for a bog to form was substantially outweighed by the rapidity with which the peatlands were being extracted.

⁸⁰⁴ T. A. Barry, “Some Considerations Affecting the Classification of the Bogs of Ireland, and Their Peats,” in *B2: General Classification*, (First International Peat Congress, Dublin, 1954), 10–11.

⁸⁰⁵ Barry, 14–16.

⁸⁰⁶ See M. E. S. Morrison, “The Ecology of a Raised Bog in Co. Tyrone, Northern Ireland,” *Proceedings of the Royal Irish Academy, Section B: Biological, Geological, and Chemical Science* 60 (1960–1959): 291–308; and D. Walker and P. M. Walker, “Stratigraphic Evidence of Regeneration in Some Irish Bogs,” *Journal of Ecology* 49, no. 1 (1961): 169–85.

⁸⁰⁷ Walker and Walker, 182.

Mirroring earlier techniques employed by the engineers of the Bogs Commission in the early nineteenth century, scientists in the post-war era incorporated sampling, bore holes, and weather monitoring in their research.⁸⁰⁸ Peat ecologists also made use of stratigraphy to investigate the history of peat formation.⁸⁰⁹ This method utilised open peat bank faces to study the visible strata of peat and contributed significantly to the field at this time. The method was made possible by virtue of extractive activity and drainage which exposed the layers of peat. For their 1961 paper “Stratigraphic Evidence of Regeneration in Some Irish Bogs,” Walker and Walker conducted field work on multiple sites including Clonsast, by then an area of significant industrial extraction.⁸¹⁰

Figure 5.2 shows a sample of another stratigraphic survey, conducted by M. E. S. Morrison in Counties Tyrone and Antrim in the late 1950s.⁸¹¹ The main contribution of this paper was an examination of the various types of sphagnum in raised bogs, and the past incidents of “extinction” of certain types. It further demonstrated the power of stratigraphy in visually representing the history and ecology of peatlands.

⁸⁰⁸ See H. Vidal, “Importance of Northwestern and Central European Bogs as Regulators of Water Balance and Climate,” in *Peat Resources, Classification and Ecology* (Second International Peat Congress, Leningrad, 1963): 167–168; and P. J. O’Hare, “Presence of *Schoenus nigricans* L. on Acid Blanket Peat in Western Ireland,” in *Peat Resources, Classification and Ecology* (Second International Peat Congress, Leningrad, 1963), 199–209.

⁸⁰⁹ Walker and Walker, “Stratigraphic Evidence of Regeneration in Some Irish Bogs,” 169–85.

⁸¹⁰ Walker and Walker, 169.

⁸¹¹ Morrison, “The Ecology of a Raised Bog,” 291–308

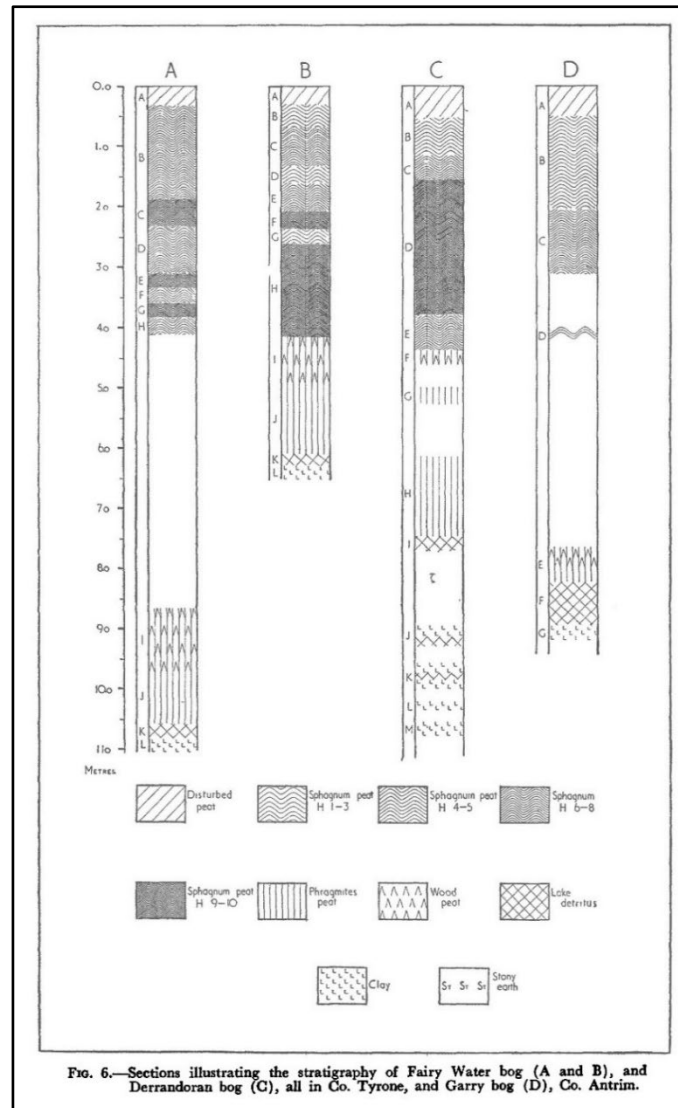


Figure 5.2 Stratigraphy sections in M. E. S. Morrison, "The Ecology of a Raised Bog in Co. Tyrone, Northern Ireland," 303.

Another important contribution to the field was the utilisation of new technologies to re-survey peatlands and identify long-term ecological changes and the impacts of human activity. Moore's 1957 paper, 'A Re-Survey of the Vegetation of the District Lying South of Dublin (1905 – 1956),' presented work he carried out on a site which had been surveyed by Robert Praeger and George Pethybridge in 1905.⁸¹² Moore, through collaboration with BNM's Research Centre, was

⁸¹² Rev. J. J. Moore, "A Re-Survey of the Vegetation of the District Lying South of Dublin (1905-1956)," *Proceedings of the Royal Irish Academy, Section B: Biological, Geological, and Chemical Science* 61 (1961-1960): 1-36.

able to make use of new technologies like aerial photography and sophisticated sampling to “to discover what changes, if any, had taken place in the vegetation over the half-century.”⁸¹³

Moore concluded that while most communities of plant life had remained stable in the area surveyed, “any obvious exception to the generalisation as to the stability of the communities over the past fifty years can be shown to be due to man’s influence, whether this be peat-cutting or agriculture.”⁸¹⁴ He identified human activities as significantly impacting the ecological stability of these sites. Moore’s study in particular demonstrates the complex interconnections between industry and ecology. While he conducted his research through collaboration with BNM, he simultaneously exposed the harmful consequences of human activities like agriculture and extraction on peatlands.

Figure 5.3 is a collection of photographs from Moore’s paper that show the geological and botanical subjects of Moore’s research. The addition of the human figure in pictures 3, 5, and 6 speak to the immersive nature of the kinds of field work that were being undertaken by bog ecologists at this time. The outputs of their research contributed to the quantification and rationalisation of the non-human environment which, in turn, facilitated extractive practices. However, these researchers were deeply connected to peat landscapes through their research. With an awareness of the position of humans within these ecosystems, as well as their physical, tactile encounters with water, plants, and peat, they were uniquely situated to become advocates for peatland protection.

⁸¹³ Moore, “A Re-Survey,” 2.

⁸¹⁴ Moore, “A Re-Survey,” 29.

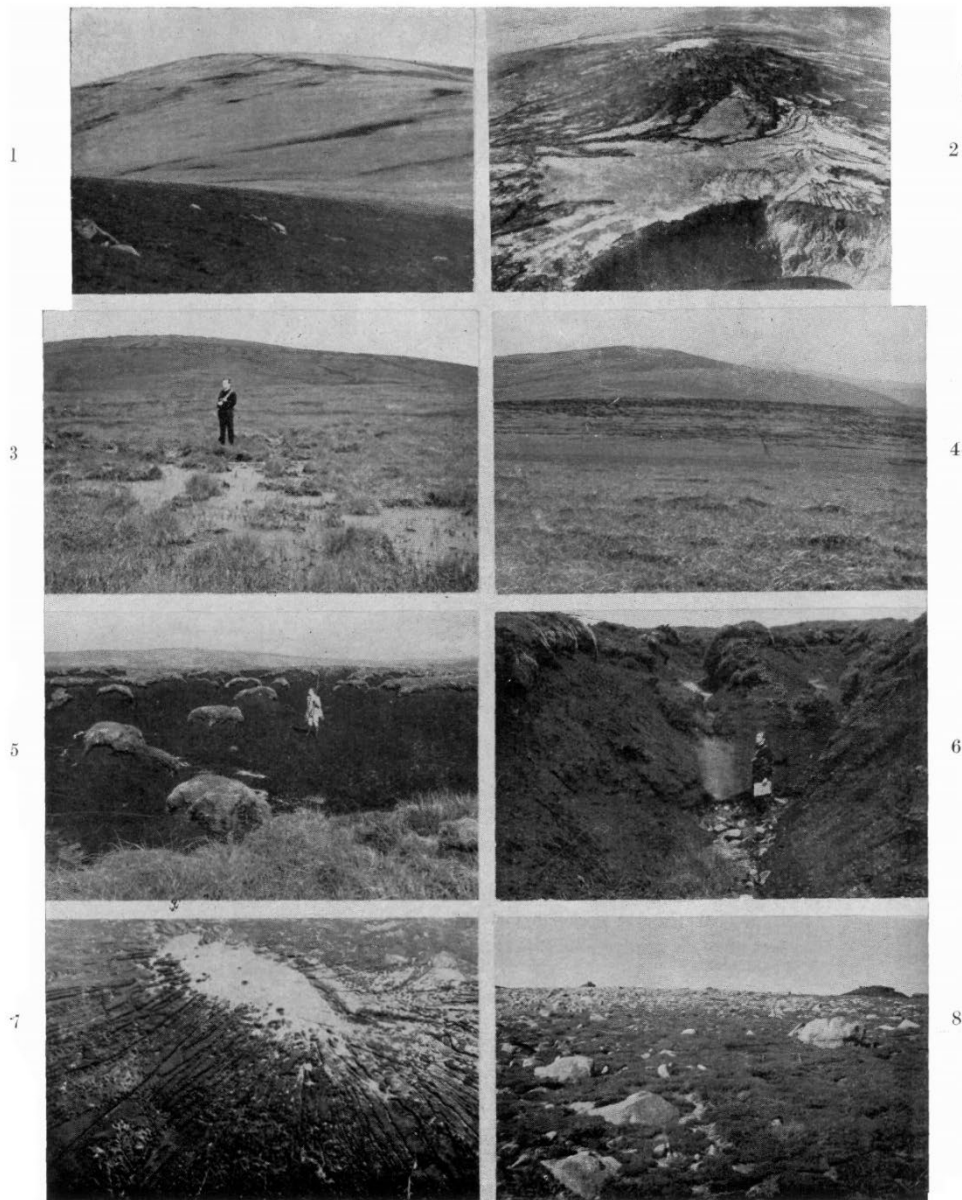


Figure 5.3 Field work photographs in Rev. J. J. Moore, "A Re-Survey of the Vegetation of the District Lying South of Dublin (1905-1956)," Plate III

The imperative of the economic usage of cutaway bog was often an overt objective of ecological research, with the capacity of cutaway bog for forestry and agriculture factoring into analysis of peatland soils and vegetation. In his 1954 paper, Moore described reclamation for afforestation and agriculture as a key objective of bog ecology.⁸¹⁵ While German ecologist, H.

⁸¹⁵ Moore, "Irish Bog Ecology."

Vidal, at the 1963 Peat Congress in Leningrad, framed reclamation as a net positive for agriculture, overall hydrology, and climate in his research pertaining to European peatlands.⁸¹⁶ Vidal's assumption was that post-extractive agricultural use was somehow beneficial for ecosystems. From 1963, BNM began a comprehensive survey of its industrial cutaway bogs with a view towards developing agriculture and forestry.⁸¹⁷ This survey was conducted by Tom Barry and his team at the Peat Research Centre comprised of ecologists and soil scientists. These surveys contributed to growing evidence of the impacts of extraction while simultaneously laying out a roadmap for future use.

Overall, this growing body of ecological research shed light on multiple dimensions of peatland formation, plant life, and hydrology. And, while the research was in many ways dependant on industry and reflected the needs of peat development and extraction, it was also instrumental in framing the ecological consequences of human activity on peatlands. The contributions of these researchers to ways of understanding the temporality of peatlands was significant. Their research took on an historical perspective through stratigraphy and paleoecology but with a view to the contemporary and future uses of peatlands in industry, forestry, or agriculture.⁸¹⁸

Increased industrial and ecological attention to Ireland's peatlands existed within a wider international discourse about extraction and ecology. The first International Peat Congress took place in Dublin in 1954 and was organised by BNM. And while this event was motivated by the desire for industrial knowledge exchange between peat-producing nations, the platform was also significant in facilitating the exchange of peat ecology research. For instance, in the proceedings of

⁸¹⁶ Vidal, "Importance of Northwestern and Central European Bogs," 167–168.

⁸¹⁷ T. A. Barry, "A Summary of Peat and Subsoil Surveys of Bord Na Móna Mires, Industrial Cutaway, 1963-69.," in *Survey, Classification, Ecology and Conservation of Peatlands* (Sixth International Peat Congress, Duluth, 1980), 1–6.

⁸¹⁸ T. A. Barry, "Origins and Distribution of Peat-Types in the Bogs of Ireland," *Irish Forestry* 26, no. 2 (1969): 1–14.

the first Congress, scientists from Finland, Norway, Scotland, and Ireland contributed papers on the methodologies of peatland ecology, classification of peatland types and the chemical properties of peatland flora.⁸¹⁹ By the next Congress, which took place in Leningrad (present-day Saint Petersburg) in 1963, the scope of the research had expanded, and the contributing countries included Sweden, Iceland, West Germany, Wales, Czechoslovakia, England, the Soviet Union, and the USA.⁸²⁰

This international exchange between peatlands scientists was shaped by an emerging international discourse around nature protection, and specifically, conservation. Environmental concerns were being articulated through channels that had developed out of post-war institution-building frameworks.⁸²¹ Concerns about resource use and rapidly deteriorating natural systems and landscapes bolstered international efforts towards the shared responsibility of environmental governance. Formed as part of a UNESCO conference in 1948, the International Union for the Conservation of Nature became a significant force in the nascent peatland conservation discourse in the 1950s and 1960s.⁸²²

The growing evidence gathered by ecological study on the impacts of industrialisation on the hydrology, flora, and fauna of peatlands sparked international concerns. Project Telma was launched in 1966 through a collaborative effort between the IUCN and the International Biological

⁸¹⁹ *Proceedings of the First International Peat Congress*, 6 vols. (Dublin, 1954).

⁸²⁰ *Proceedings of the Second International Peat Congress*, 2 vols. (Leningrad, 1963).

⁸²¹ See Anna-Katharina Wöbse, “‘The World after All Was One’: The International Environmental Network of UNESCO and IUPN, 1945–1950,” *Contemporary European History* 20, no. 3 (August 2011): 331–48; and Iris Borowy, “Before UNEP: Who Was in Charge of the Global Environment? The Struggle for Institutional Responsibility 1968–72,” *Journal of Global History* 14, no. 1 (March 2019): 87–106.

⁸²² Warde et al, *The Environment*, 35.

Programme.⁸²³ This was a first attempt at international collaboration in peatlands conservation.⁸²⁴ According to ecologists Peter Moore and David Bellamy, the objectives of the project were “the preparation of a world list of peatland sites which are of international significance to science and the promotion of their conservation,” and “the encouragement of communication and collaboration amongst research scientists investigating peatlands.”⁸²⁵ As shown at the beginning of this chapter, David Bellamy recognised that peatlands were not a typical charismatic landscape.⁸²⁶ And so, through the implementation of Project Telma, ecologists could compile a scientifically-informed argument for their conservation. The critical features of the early peat conservation discourse, then, were the need for scientific arguments in their favour and the search for solutions to the rapid degradation of existing peatlands. This compilation of a global list of peatlands facilitated the identification of remaining intact peatland sites.

The interdependencies between industry and ecology led, on the one hand, to the expansion of extraction through more accurate and specific knowledges about the functioning of peatlands. But the negative impacts of human activity were increasingly brought to the fore. The growing international consensus that conservation of certain peatlands was necessary marked a break with previous conceptions of the value of peatlands. Beyond this growing conservation imperative, the circumstances of the 1970s generated a renewed attention to peatlands. As Tom Barry described it, “the winds of interest [...] blow from all directions.”⁸²⁷ The energy crisis, a growing number of

⁸²³ The International Biological Programme was established in 1964 to manage large-scale international ecological projects. See Warde et al, 136.

⁸²⁴ P. D. Moore and D. J. Bellamy, *Peatlands*, 2nd ed. (New York: Springer-Verlag, 1976), 205–206.

⁸²⁵ Moore and Bellamy, *Peatlands*, 206.

⁸²⁶ Bellamy and Pritchard, “Project ‘Telma,’” 35.

⁸²⁷ T. A. Barry, “Environment Protection and the Bogs of Ireland,” in *Peat and Peatlands in the Natural Environment Protection*, vol. 1 (Fifth International Peat Congress, Poznan, 1976), 20.

emergent cutaway bogs, as well as national and international pressures for conservation generated competing approaches to peatland values and uses.

IV. Energy crisis – “uneconomic” extraction

Given that its mandate was the large-scale extraction of peat, BNM could be considered an industrial success for much of the 1950s and 1960s. In broad terms, the total peat fuel extraction had increased from 740,000 tons per annum in 1954 to 4,754,549 tons per annum in 1969.⁸²⁸ Annual production was impacted by a variety of factors, not least of which was the weather. The inconsistency of weather conditions severely impacted production in the mid-1960s and by the 1968/69 season the Board was in financial deficit. Temporary relief was granted by the state under the 1968 Turf Development Act.⁸²⁹ By the 1970s, production had plateaued due to these weather inconsistencies, the exhaustion of working bogs, and the spatial and economic limitations of expansion.

All peatlands under development by the Board in the 1960s were large-scale and had been made accessible through the development of infrastructure like railways and roads. Describing the state of production in 1963, then managing director D.C. Lawlor explained, “all the larger bog areas which are suitable for development have either been brought into production or are being prepared for production. The only large areas for which no production is planned are those whose

⁸²⁸ D. C. Lawlor, “Operations of Bord Na Móna, the Irish State Peat Board,” in *Production, Transportation and Utilization*, vol. 1 (Second International Peat Congress, Leningrad, 1963), 323; Bord na Móna, *Annual Report and Accounts*, no.23 (1968), 7.

⁸²⁹ J. A. Bristow and C. F. Fell, “Bord Na Mona: A Cost-Benefit Study,” Research Series (Dublin: Institute of Public Administration, 1971), 19.

depth, elevation, or gradients render them incapable of economic development.”⁸³⁰ These sites had been determined uneconomic from the point of view of accessibility and output. They included smaller areas of bog in the midlands as well as upland blanket bogs in the west of Ireland. This spatial and economic constraint impacted the company’s ability to expand its productive capacity.

Furthermore, an increasingly diverse energy market meant that the Board had to compete with other fossil fuels in electricity production and domestic consumption. In 1964, peat accounted for 36% of electricity generation in Ireland, with oil plants and coal plants combined providing 37.5%.⁸³¹ The ESB was obligated to buy for peat fuel to supply power stations at prices negotiated with BNM. These prices fluctuated depending on the successes of annual production. This meant that peat was often more expensive than oil and coal.⁸³² The inconsistency of supply due to weather dependencies further made the ESB more inclined to invest in oil for electricity generation. This led to the construction of several large capacity oil-burning stations in the late 1960s.⁸³³

To increase the diversity of the electricity market, the ESB also began work in 1968 on the pumped-storage plant at Turlough Hill, which came online in 1974.⁸³⁴ As well as this, institutional and political interest in developing a nuclear power station in Ireland gained momentum in the late 1960s. Finally, gas was discovered to be located off the southern coast of Ireland at Kinsale in 1971 which further contributed to the national energy mix. This increasingly complex energy market heavily impacted the economic viability of the Irish peat industry. By 1973, peat accounted for just

⁸³⁰ D.C. Lawlor, “Operations of Bord Na Móna, the Irish State Peat Board,” in *Production, Transportation and Utilization*, vol. 1 (Second International Peat Congress, Leningrad, 1963), 321.

⁸³¹ ESB, *Annual Report of the Electricity Supply Board Ireland*, no.33 (1960), 7.

⁸³² Manning and McDowell, *Electricity Supply in Ireland*, 122.

⁸³³ These were Great Island in Wexford in 1967, Tarbert in Kerry in 1969, and an extension to the Pigeon House station in Dublin in 1965. See Manning and McDowell, 184–186.

⁸³⁴ Manning and McDowell, 122.

24% of electricity generation, while oil plants alone contributed 64% of the country's electricity supply.⁸³⁵

But, in the 1970s, a new global energy landscape meant that the acceleration of peat extraction in Ireland gained a renewed salience. The rhetoric about energy security and national sovereignty which had dominated the early years of peat extraction was reinvoked in the wake of the oil crisis. The oil embargo resulting from U.S. interventions in the Israel-Egypt conflict in 1973 brought the fragility of the global energy system into sharp relief. Speaking in December 1973 on the impact of this crisis for Ireland, then Minister for Transport and Power, Peter Barry, told the Dáil,

“this country is very highly dependent on oil, which accounts for 69 per cent of primary energy sources and 65 per cent of production of electricity by the Electricity Supply Board. In 1972 our total imports of petrol products amounted to 4.8 million tons. Of this total 2.7 million tons were imported in the form of crude oil for refining at Whitegate and all or practically all of this crude oil originated in Arab producing countries.”⁸³⁶

Barry demonstrated Ireland's dependency on an increasingly complex global energy supply chain, as well as the increasing use of hydrocarbons in Ireland by this time. This dependency sparked a renewed attention to the domestic production of energy.

In response to the crisis, BNM devised a Third Development Programme in 1974.⁸³⁷ While ultimately devised to address the energy insecurity initiated by the oil crisis, this programme also functioned as a way for the spatial limitations facing the industry to be overcome through an influx of financial investment. This investment meant that the peripheral peatlands, which had been deemed uneconomic for extraction, could be developed. This is clear in figure 5.4 which shows the

⁸³⁵ ESB, *Annual Report of the Electricity Supply Board Ireland*, no.46 (1973), 5.

⁸³⁶ Peter Barry speaking in Houses of the Oireachtas, “Oil Supplies Situation: Motion. – Dáil Éireann (20th Dáil),” text, December 11, 1973, Ireland, <https://www.oireachtas.ie/en/debates/debate/Dáil/1973-12-11/43>.

⁸³⁷ Clarke, *Brown Gold*, 188-189.

proposed extent of the expansion. In the programme, the Board laid out a plan for the addition of 40,000 acres of bog to come into development, an increase of 1.7 million tons of milled peat produced annually, 5.5 million bales briquettes, plus 1500 additional permanent workers, and 400 seasonal workers.⁸³⁸ The initial cost of these developments was established at £20 million. However, this amount increased substantially over the course of the programme.

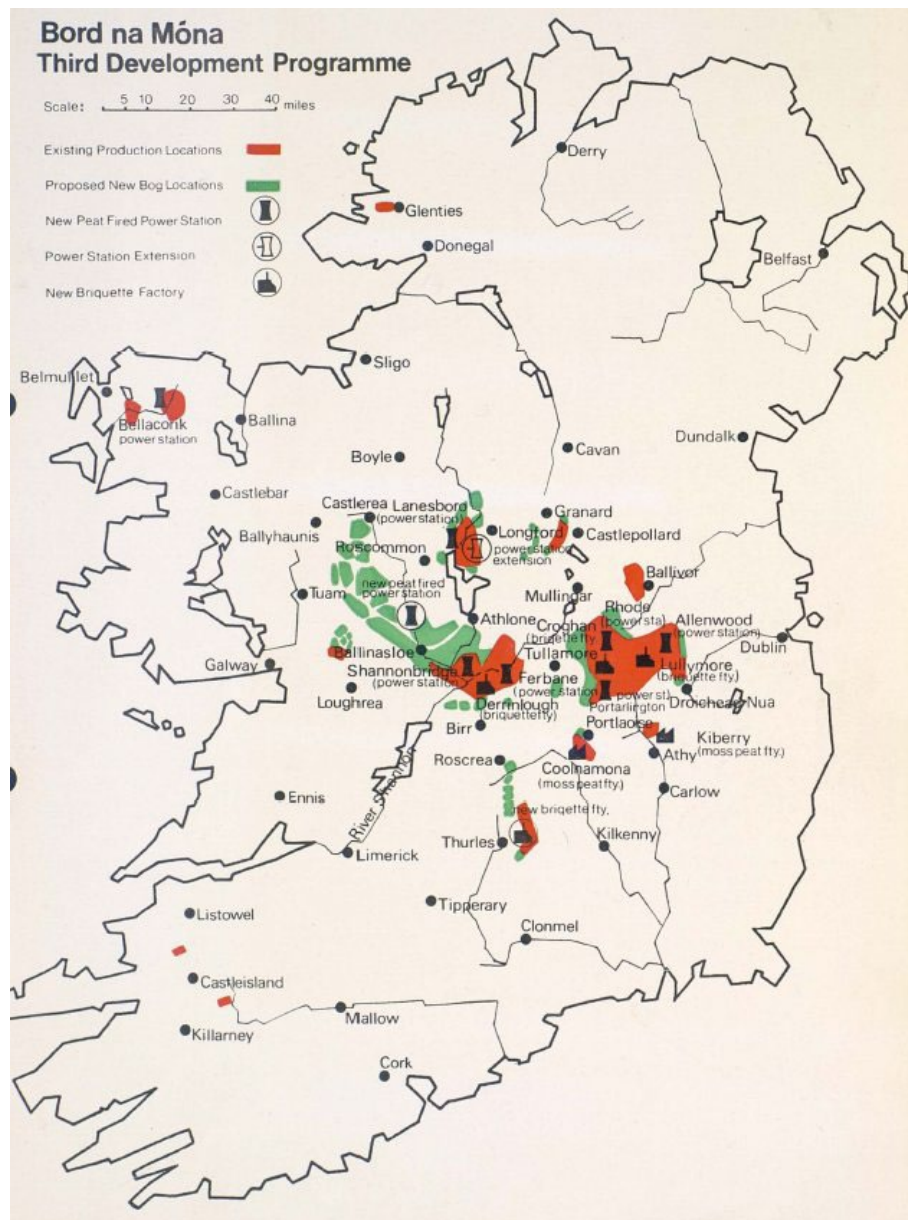


Figure 5.4 Proposed new bog locations as part of the Third Development Programme. Bord na Móna, Report and Accounts (1975)

⁸³⁸ Houses of the Oireachtas, “Turf Development Bill, 1975: Second Stage. – Dáil Éireann (20th

Dáil) – Thursday, 24 Jul 1975 – Houses of the Oireachtas,” text, July 24, 1975, Ireland,

<https://www.oireachtas.ie/en/debates/debate/Dáil/1975-07-24/41>.

The programme was financed by the Irish exchequer, the World Bank and European banks.⁸³⁹ The availability of international and particularly European financial assistance reflected the changing dimensions of Ireland's economy. As part of attempts to modernise Ireland's economy, and thus strengthen Ireland's application to the European Economic Community, policies in the 1960s had moved the country towards a more globalised and free trade-oriented economy.⁸⁴⁰ When Ireland finally joined the EEC in 1972, it attempted to demonstrate its open and diverse trading capacity and encouraged international financial investment. This European economic dimension was central to the success of the Third Development Programme. The adoption of the programme allowed BNM to increase its capital borrowing limit, which facilitated the expansion of development into the bogs previously considered uneconomic.

The language in debates surrounding the adoption of the Third Development Programme demonstrated a renewed enthusiasm for the expansion of the peat industry in the context of national energy security. The rhetoric which had dominated the efforts to develop the peat industry in the 1930s was reinvoked in the context of this crisis. South Kerry Labour Party Senator Michael Moynihan, speaking in the debate on the Turf Development Bill in 1975, stated,

“while we all abhor the situation brought about by the oil crisis in 1973 and 1974 with its balance of payments problems and so on, one lesson we must have learned was that, until that time, we had all forgotten that we had within our own territory large energy resources. We had completely accepted the fact that oil was to be the whole basis of our future energy production. That situation led the Turf Board into serious problems. Fortunately, for the country's sake, the board continued their work and are now on the fringe of expansion, so

⁸³⁹ Houses of the Oireachtas, “Turf Development Bill, 1975: Second Stage;” and Donal Clarke, *Brown Gold: A History of Bord Na Móna and the Peat Industry in Ireland* (Dublin: Gill & Macmillan, 2010): 191–192.

⁸⁴⁰ Brian Girvin, “The Historical Dimension of Ireland's Road to Modernisation and Europeanisation,” *Nordic Irish Studies* 9 (2010), 128–31.

urgently required for the country's energy situation and its balance of payments problem.”⁸⁴¹

The influx of cheaper hydrocarbons in the preceding decades had led to a dismissal of peat as a resource of national importance in the public mindset. But the implications of the energy crisis were such to reestablish confidence in the peat industry, allowing it to push beyond what had been previously understood to be the limits of its expansion. Fine Gael Senator Patrick O’Toole from Mayo East, again speaking during the debate in 1975, claimed that “it goes without saying that the days of having bogland referred to as wasteland are gone.”⁸⁴² The wasteland narrative persisted into the 1970s, despite the extent of industrial development accomplished by BNM.

The energy crisis simultaneously accelerated interest in nuclear power, which had been under consideration in Ireland since the 1960s. The lead-in time of such a development meant that BNM’s Third Development Programme was the initial action taken to offset the increase in oil prices. However, in 1972, the ESB chose a location on the southeastern coast of Ireland, Carnsore Point, as the site of a future nuclear power plant. This proposal was accepted politically and received a favourable response in the government. By 1973, however, a nascent antinuclear movement had begun, first amongst local activists but throughout the 1970s expanding into an organised and effective campaign, the first of its kind in Ireland.⁸⁴³ Growing global environmental

⁸⁴¹ Michael Moynihan speaking in Houses of the Oireachtas, “Turf Development Bill, 1975: Second Stage. – Seanad Éireann (13th Seanad),” text, July 29, 1975, Ireland, <https://www.oireachtas.ie/en/debates/debate/seanad/1975-07-29/7>.

⁸⁴² Patrick O’Toole speaking in Houses of the Oireachtas, “Turf Development Bill, 1975: Second Stage. – Seanad Éireann (13th Seanad),” text, July 29, 1975, Ireland, <https://www.oireachtas.ie/en/debates/debate/seanad/1975-07-29/7>.

⁸⁴³ Liam Leonard, *Green Nation: The Irish Environmental Movement from Carnsore Point to the Rossport Five*, vol. 2, Ecopolitics Series (Drogheda: Greenhouse Press, 2006).

consciousness manifested in Ireland at this time in the movement against nuclear power.⁸⁴⁴

Effective protest at Carnsore Point ultimately led to the abandonment of the ESB's plans to build a nuclear power station. However, this meant that at the time the expansion of the peat industry was excluded from environmental arguments over the preferred resources for Ireland's energy security.⁸⁴⁵

The energy crisis provided an opportunity for BNM, which reasserted the national significance of the peat industry. The anti-nuclear movement complicates purely extractivist understandings of this development however, with peat extraction existing outside the realm of the environmentalist discourse which was purely in opposition to nuclear power. Speaking in relation to the expansion of BNM's activities, Fianna Fáil TD from Clare, Sylvester Barrett expressed that "the energy crisis of 1973 made us all more turf or bog conscious, and we had no alternative but to look at the further development of our own natural resources of fuel in order to survive the energy crisis."⁸⁴⁶ This "bog consciousness" would expand to include new visions of peatland futures.

V. Cutaway reclamation – post-extractive futures

The increased extraction resultant from the Third Development Programme increased the urgency with which the issue of cutaway bog usage was being considered. As part of the proceedings of the 1976 International Peat Congress in Poznan, soil scientists and ecologists contributed to a discussion of the impacts of extraction on peatlands through the lens of soil

⁸⁴⁴ Astrid Mignon Kirchhof and Jan-Henrik Meyer, "Global Protest against Nuclear Power. Transfer and Transnational Exchange in the 1970s and 1980s," *Historical Social Research* 39 (2014): 165190.

⁸⁴⁵ Morris, "For Peat's Sake," *The Guardian*, August 21, 1978: 11.

⁸⁴⁶ Sylvester Barrett in Houses of the Oireachtas, "Turf Development Bill, 1975: Second Stage. – Dáil Éireann (20th Dáil)," text, July 24, 1975, Ireland.

<https://www.oireachtas.ie/en/debates/debate/Dáil/1975-07-24/41>.

conditions. This linked directly to the potential of cutaway bog for afforestation and agricultural use. BNM researcher and librarian John Cooke contributed a paper titled “Ireland’s Peatlands – Extent and Utilisation,” in which he dedicated significant attention to the discussion of BNM’s research on cutaway bog.⁸⁴⁷ He wrote, “bog reclamation for subsequent land use has always been an integral part of Bord na Móna’s peat production policy. To this end care is taken during peat extraction to leave behind on the sub-peat mineral soil a sufficient depth of in situ peat on milled areas, and in situ peat together with stripping spoil on sod peat areas to promote crop cultivation.”⁸⁴⁸ Cooke spoke to the confidence in reclamation that was a guiding principle of the peat industry, as well as the interventions the Board was taking to ensure this future. He concluded that after many years of research, grass for pasture and silage was producing the best results in cutaway experiments.

Peatland ecology was central to the study of cutaway utilisation in the 1970s. Collaboration between BNM and An Foras Talúntais, the institute for agricultural research in Ireland, yielded new ways of understanding and imagining peatlands. Historian Gabriel Coleman argues that, since the 1950s, AFT had been engaged in a process of developing an industrial agricultural imaginary in Ireland through the National Soil Survey.⁸⁴⁹ Within this imaginary, soil types across the island were quantified and ranked based on their capacity to grow certain kinds of crops or support animal agriculture. As the question of the future use of cutaway bog became more urgent, this approach to land classification was incorporated into emergent research. This approach analysed cutaway bog that had undergone “man-modification” and classified the peat soil that remained on the land.⁸⁵⁰

⁸⁴⁷ John Cooke, “Ireland’s Peatlands - Extent and Utilization,” in *Peat and Peatlands in the Natural Environment Protection*, vol. 1 (Fifth International Peat Congress, Poznan, 1976): 315–327.

⁸⁴⁸ Cooke, 325.

⁸⁴⁹ Gabriel Coleman, forthcoming. PhD Thesis, chapter one, “Laying Ground: Agricultural Research and Ireland’s Farmland Imaginary.”

⁸⁵⁰ R. F. Hammond, *The Peatlands of Ireland - To Accompany the Peatlands Map of Ireland*, 1978, 2nd ed., Soil Survey Bulletin 35 (Dublin: An Foras Talúntais, 1981), 28.

This research was the focus of a 1978 report titled “The Peatlands of Ireland,” and an accompanying map.⁸⁵¹ The cartographer, Robert Hammond, had been involved in peatland surveys with AFT in the 1960s. In the report introduction, Hammond reflected on the history of mapping peatlands in Ireland, claiming that much of the data that had been used in the twentieth century was still based on the surveys of the Bogs Commission.⁸⁵² He positioned his work as part of a new iteration of spatial representation of peatlands, wherein the objective was “the ultimate land use potential” of cutaway bogs.⁸⁵³ With this objective in mind, it is fair to say that this map existed within the longer legacy of mapping as a tool for exploitation.

The map compiled data from The National Soil Survey, aerial photography, the Geological Survey of Ireland, the Peat Bog Survey of Northern Ireland, and Land Use Survey Maps from Northern Ireland. In addition to this, field work supported the aerial and cartographic data.⁸⁵⁴ The research involved collaboration with Bord na Móna, J. J. Moore and the Botany Department in UCD, botanists from TCD, along with soil scientists and geographers. In this way, ecological perspectives were incorporated into development planning.

The contribution of the Hammond map and report was a system of classification for peat soils “which define[d] the specific soil characteristics essential for evaluating their ultimate land use.”⁸⁵⁵ The motivation was the development of a frame of reference for planning future cutaway bog use for agricultural production and forestry; however, the map and report also contributed a first visual representation of the extent of peatland degradation across the island of Ireland. The peat soil classification was intended to account for peatlands which had been modified to such an extent that

⁸⁵¹ Hammond, *The Peatlands of Ireland*; and R. F. Hammond, *Peatland Map of Ireland*, 1:575,000 (National Soil Survey, An Foras Talúntais, 1978).

⁸⁵² Hammond, *The Peatlands of Ireland*, 1.

⁸⁵³ Hammond, 1.

⁸⁵⁴ Hammond, 2.

⁸⁵⁵ Hammond, 17.

their ecological classification, which had previously been based on surface vegetation or botanical communities, was of limited value.

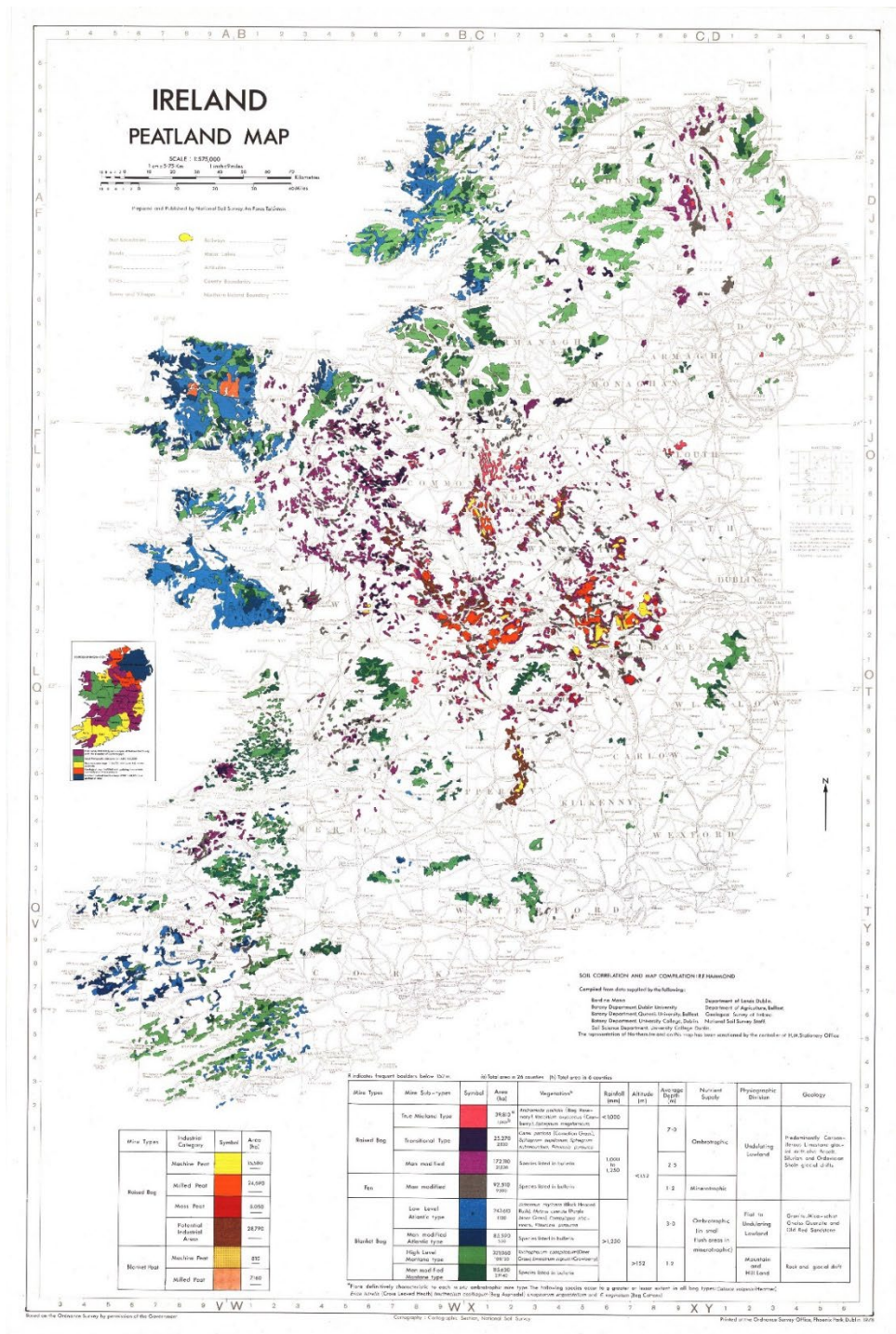


Figure 5.5 R. F. Hammond, *Peatland Map of Ireland*, 1:575,000 (National Soil Survey, *An Foras Talúntais*, 1978).

In the colour-coded map, shown in figure 5.5, peatlands were divided into raised and blanket bogs, with sub-categories which included industrial activity on the bog, ‘true’ peatland types, and ‘man-modified’ types. Within these categories, cutaway or extracted peat sites were further divided to identify their soil conditions. While overtly claiming the objectives of the report and map as serving the interest of post-extractive productivity, Hammond also indicated a belief in the conservation of ideal peatland types. He wrote, “their significance for conservation and amenity is also extremely important in long term national planning. Raised bogs, once typical of the lowlands Midlands landscape, have virtually disappeared.”⁸⁵⁶ The Hammond map was another example of the feedback between industry and ecology. The production of the map facilitated the future exploitation of bogs as pasture or forestry while simultaneously giving evidence of the devastating consequences of their drainage and extraction.

Economic and land pressures heightened BNM’s determination to reimagine peatlands as productive landscapes for agriculture or forestry. This was partially driven by the exhaustion of peat stocks from their sites. But it was also a business imperative in order to remain financially viable. The priority for the Board in the 1980s was carrying out the agenda of extraction laid out in the Third Development Programme as well as demonstrating the viability of cutaway peatlands. Speaking about the challenges of this time, BNM archivist Tony McKenna claimed, “the availability of natural gas led to the loss of commercial and domestic users, private peat producers provided more competition, conservationists questioned the use of bogs for development purposes and the social element of the board’s mission was no longer valued.”⁸⁵⁷

The overall viability of state-sponsored bodies gained increasing salience in the 1980s, with the Dáil directing attention towards their economic and social benefits. In 1978, the Oireachtas established a Joint Committee on State-Sponsored Bodies with the intention of establishing formal oversight over a cadre of enterprises whose contributions to the national

⁸⁵⁶ R.F. Hammond, *The Peatlands of Ireland*, 1.

⁸⁵⁷ Clarke, *Brown Gold*, 208.

economy were significant. FF Minister for Public Service George Colley described the undertaking as such,

“the whole State-sponsored body area of Government is now very large. In the period since 1927, when the first State-sponsored bodies were established, there has been an enormous growth in their number and scale of operation; by reason of the numbers of people and the capital they employ and the size of their output of goods and services, they now play a major role in the national economy. Yet these bodies have not been established as part of any grand design; instead, they have been established as solutions to particular problems as they arose.”⁸⁵⁸

Colley expressed concern over the ad hoc establishment and relative independence of these institutions which were so economically linked to the overall stability of the state. In the Dáil debate surrounding the re-introduction of this committee, whose role had relapsed since 1976, the overwhelming consensus was that the value of state-sponsored bodies was clear. Still, their organisation and commercial complexity required more government supervision. As part of the committee’s work, in 1980, they published a report on BNM which outlined the position of the Board at the beginning of the decade.⁸⁵⁹

While the report devoted considerable attention to the finances, profitability, and efficiencies of the Board in its current system of operation, it also looked to the future of the company in a subsection titled “When the Turf Has Gone.”⁸⁶⁰ The report described the Board’s position as follows,

“since the main input is not reproducible, it is in the nature of an extractive industry that it has a finite life. In about fifty years’ time the bogs developed by Bord na Móna to date, or planned for development under the Third Programme, will have been worked out and turf

⁸⁵⁸ Houses of the Oireachtas, “Joint Committee on State-Sponsored Bodies: Motion. – Dáil Éireann (21st Dáil) – Wednesday, 17 May 1978 – Houses of the Oireachtas,” text, May 17, 1978, Ireland.

⁸⁵⁹ Joint Committee on State-Sponsored Bodies, “Bord Na Móna” (Dublin: Tithe an Oireachtas, 1980), UCDA P91/49.

⁸⁶⁰ Joint Committee on State-Sponsored Bodies, “Bord Na Móna,” 30.

production will cease. However, where this industry differs from, say, mining is that the production process actually increases the value of the land for other purposes. Since nothing can be grown or built on virgin bog, it is literally valueless, but a bog which has been drained and exploited until the remaining peat layer averages only half a metre clearly has potential as cultivable land.”⁸⁶¹

Within this report, then, the finite nature of peatlands was made explicit but, as had historically been the case, the potential future use for cutaway was used to extend the geographical and economic limitations of the industry. The assertion that “virgin bog” was “valueless” reflected the imperial improvement discourse and represented a persistent continuity of beliefs about the value of peatlands for industry in the 1980s.⁸⁶²

The report also articulated the challenges of agricultural reclamation on cutaway bogs. These challenges were primarily economic in nature, with things like the heavy fertiliser use which would be required considered within the overall cost investment.⁸⁶³ It concluded that despite the clear advantage of transitioning industrial cutaway to agricultural land, this had its limitations. Cutaway was considered within the same frameworks that had been ascribed to intact peatlands less than one hundred years previously. The report claimed,

“the present state of knowledge indicates that cutaway is best considered as akin to what is traditionally considered marginal land: all the signs are that it will not be cheap to bring into cultivation and the expense of making it fit for use will vary according to the product being considered. In these circumstances, one cannot ignore the possibility that it will turn out that, at least for some of the cutaway, the best use is no use.”⁸⁶⁴

⁸⁶¹ Joint Committee on State-Sponsored Bodies, “Bord Na Móna,” 30.

⁸⁶² Joint Committee. 30.

⁸⁶³ Joint Committee. 31.

⁸⁶⁴ Joint Committee. 31.

Mirroring the language of the imperial era, cutaway, in this reading, was considered marginal land whose usefulness required significant human and economic investment to make economically productive. And, where this was not feasible, the land would simply be abandoned.

BNM, for its part, continued to present its vision for the future of cutaway as being inherently linked to agricultural production. This is clear in figure 5.6 which shows an image produced for a children's book about the operations of the Board.⁸⁶⁵ In this imagining, the mechanised extraction of peat and the combustion of this fuel for electricity generation were presented alongside rolling hills and green pasture, the symbolic pastoralism of the Irish agricultural industry.

⁸⁶⁵ Noel Jones, *Bord Na Móna*, Irish Environmental Library Series 59 (Dublin: Folens, 1979), 112–113.

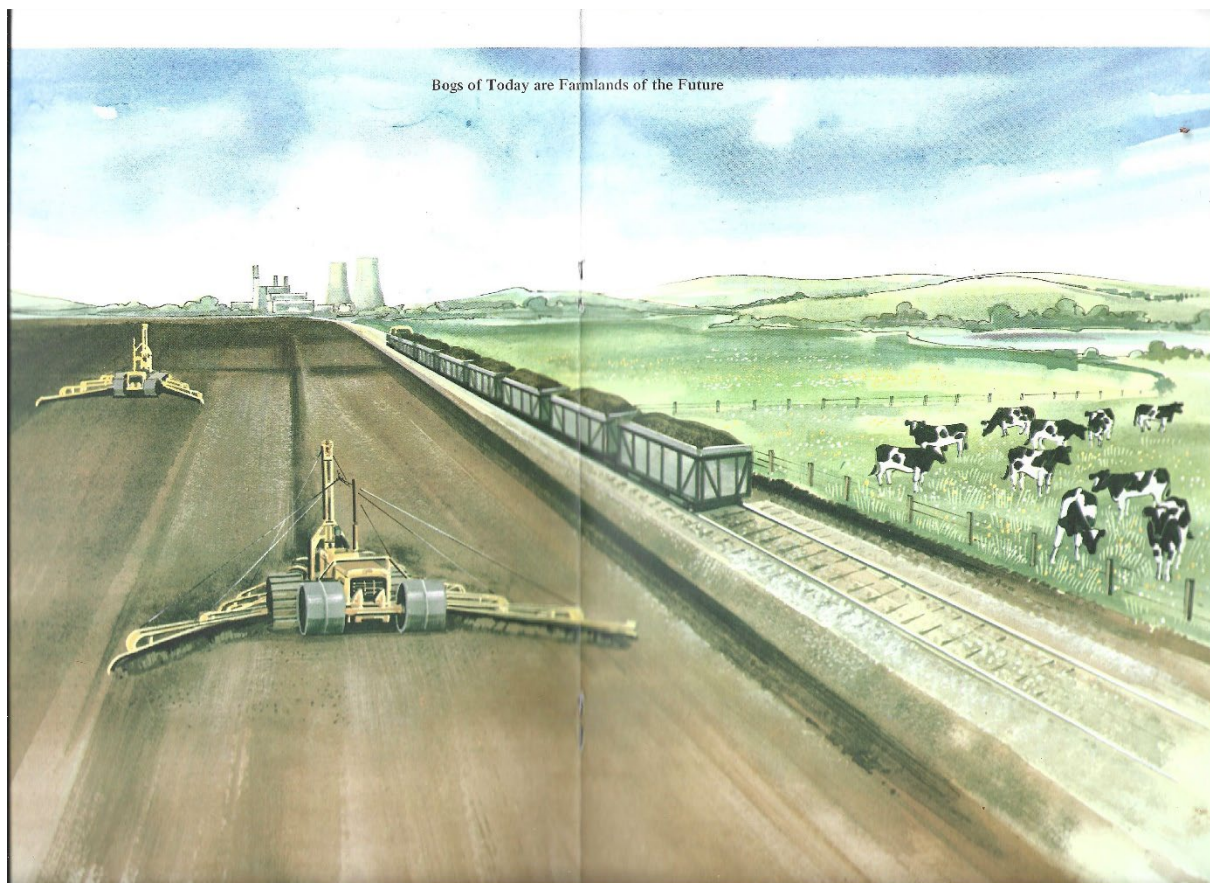


Figure 5.6 “Bogs of Today are the Farmlands of the Future,” Noel Jones, *Bord Na Móna*, Irish Environmental Library Series 59 (Dublin: Folens, 1979), 112 – 113.

The crisis of cutaway, mounting pressures for conservation, as well as global resource insecurity were all substantial concerns in the proceedings of the Sixth International Peat Congress in Duluth, Minnesota in 1980. The Congress theme was ‘The Role of Peatlands in a World of Limited Resources – Energy, Food, Fiber and Natural Areas.’⁸⁶⁶ Tom Barry presented a paper titled, “A Summary of Peat and Subsoil Surveys of Bord na Móna Mires, Industrial Cutaway, 1963-69.”⁸⁶⁷ He demonstrated the imperative for productive cutaway development for the Board and described the surveys conducted by Bord na Móna in the 1960s alongside Hammond’s work

⁸⁶⁶ *Proceedings of the Sixth International Peat Congress*, 1 vol. (Duluth, 1980).

⁸⁶⁷ T. A. Barry, “A Summary of Peat and Subsoil Surveys of Bord Na Móna Mires, Industrial Cutaway, 1963-69.,” in *Survey, Classification, Ecology and Conservation of Peatlands* (Sixth International Peat Congress, Duluth, 1980): 1–6.

with the National Soil Survey. Barry's observations on the results of the surveys were that the complexity of human-nature entanglements on the peatlands left the question of the peat content of the mineral sub-soil in an ambiguous position.⁸⁶⁸ He wrote, "in the cutaway, in the long term, chemical content, wastage, weathering, cultivation and husbandry methods will be interacting over time. How valuable are the peat residues likely to be in this context? That is the important question facing soil researchers on industrial cutaway *Hochmoore* in Ireland today."⁸⁶⁹ By overtly detailing these contradictions and challenges of peat soil analysis in the interest of cutaway development, Barry demonstrated that the question of cutaway viability was still very much unresolved.⁸⁷⁰

In a further contribution to the congress proceedings, BNM agricultural researcher, J. Healy presented a paper titled 'Industrial Cutaway Bog Development in Ireland.'⁸⁷¹ In it he detailed the contemporary research being carried out on the productive use of cutaway bog. These uses included beef breeding, beef finishing, sheep production, dairying, cereals, arable crops, forestry, and biomass. Healy concluded that, "the objective in the long term is that with more experience and further research certain areas can be designated for specific purposes long before they become available following fuel production."⁸⁷² Healy similarly showed that, while research was ongoing, the results were far from conclusive.

Healy's remark highlights the critical challenge that faced actors from within BNM and the wider agricultural community in Ireland. The necessity of knowledge, expertise and tangible evidence of the practicability of successful conversion of cutaway to pasture drove ecological research at this time. The economy of reclamation was such that, in order for the Board to remain

⁸⁶⁸ Barry, 6.

⁸⁶⁹ Barry, 6.

⁸⁷⁰ Barry, 5.

⁸⁷¹ J. Healy, "Industrial Cutaway Bog Development in Ireland - Food and Energy," in *Bog Cultivation and Afforestation. The Use of Peat, Peat Products and Sapropel in Agriculture and Horticulture* (Sixth International Peat Congress, Duluth, 1980), 387–97.

⁸⁷² Healy, 389.

viable, it had to demonstrate the potential of this future for exhausted industrial bogs. But, in the production of research on cutaway peatlands, the consequences of extraction were made more visible, thus contributing to the wider conservation discourse.

VI. Conservation – protect what remains

Describing the emergence of environmental consciousness in the 1960s and 1970s, Warde et al write, “the environment was an idea that burst into life in a futurological soup, but in this particular case it was framed by a narrative about the planet in which scientists both identified a general and advancing degradation in the world around them and felt it incumbent upon themselves to provide solutions.”⁸⁷³ This was true in the case of peatland conservation where ecologists and conservationists began to express concerns over the rapidly deteriorating landscapes. Concerns in Ireland reflected wider international discourses in the 1970s.⁸⁷⁴

Conservation in Ireland was gaining momentum as an intrinsic part of governance. In the 1960s, conservation and amenity planning were under the purview of An Foras Forbartha, the National Institute for Physical Planning and Construction Research.⁸⁷⁵ This organisation was established under the 1963 Planning Act.⁸⁷⁶ While this act formally involved An Taisce in planning proposals of heritage and environmental interest, it also created a dependency between economic

⁸⁷³ Warde, et al., *The Environment*, 15.

⁸⁷⁴ Borowy, “Before UNEP:” 87–106; Sverker Sörlin and Eric Paglia, *Stockholm and the Rise of Global Environmental Governance: The Human Environment*, Studies in Environment and History (Cambridge, United Kingdom; New York, NY: Cambridge University Press, 2025); Wöbse, “The World after All Was One:” 331–48.

⁸⁷⁵ Nicholas Rees, Brid Quinn, and Bernadette Connaughton, *Europeanisation and New Patterns of Governance in Ireland* (Manchester; New York: Manchester University Press, 2009), 124.

⁸⁷⁶ Rees, et al., 124.

and conservation goals and limited the capacity of the conservation movement in Ireland to move beyond developmental frameworks and links to industry.⁸⁷⁷

Despite its setting in the realm of planning and construction, the National Heritage Inventory was begun in 1968 as part of An Foras Forbartha's policy-publication "The Protection of the National Heritage."⁸⁷⁸ Thus, as part of Development Plans produced in each county in Ireland through the 1970s, areas of scientific interest were considered for conservation. Scientific interest was assessed according to botanical, ecological, ornithological, zoological, and geological features.⁸⁷⁹ The rarity or necessity of certain features in the overall stability of ecosystems was factored into the classification. Therefore, ecological research was crucial for these assessments.

Ann Quinn, an assistant lecturer in botany in UC Galway and a staff member of the planning division of AFF, detailed the objectives of conservation in a 1973 issue of *The Capuchin Annual*.⁸⁸⁰ She wrote,

"changes in nature and natural processes arising from man's activities over past centuries have been relatively slow. At present, many features are being altered rapidly, and few areas remain untouched. Even though some habitats have the capacity to recover if the disturbing influence is withdrawn, the effects of man on his environment have become more concentrated in time and dispersed in space. These impacts have resulted in landscapes lacking visual variety, ecological diversity and stability."⁸⁸¹

Quinn's concerns, and subsequently the overall concerns of the conservation movement, included landscape changes, damage to ecosystems, and the overall stability of ecosystems.

⁸⁷⁷ Rees, et al., 124.

⁸⁷⁸ An Foras Forbartha, *Areas of Scientific Interest in Ireland: National Heritage Inventory* (Dublin: An Foras Forbartha, 1981), 1.

⁸⁷⁹ Ann C. McQuinn, "Conservation in Ireland," *The Capuchin Annual* 40 (1973), 218-219.

⁸⁸⁰ Biographical information on Ann Quinn in Father Henry, ed., *The Capuchin Annual* 40 (Dublin: The Capuchin Society, 1973), 405.

⁸⁸¹ McQuinn, "Conservation in Ireland," 221.

Quinn's reference to the pace at which ecological conditions were changing, and the anthropogenic origins of these changes reflected the international environmental discourse of the time.

Post-war expansion of production and consumption of energy increased the scale and intensity of the human impact on the non-human environment.⁸⁸² In 1972, the international association of scientists and economists known as the Club of Rome published their *Limits to Growth* report which framed the challenges of economic expansion in terms of finite resources and an ever-increasing global population.⁸⁸³ This report presented a complex reimagining of the economic growth imperative that utilised, then sophisticated, computer models to project the exhaustion of global fossil fuels and food resources.⁸⁸⁴ The findings of this report informed international political and environmental discourses.

Environmental governance in Ireland developed alongside increasingly European and international influences. In 1970, as part of European Conservation Year, the Irish state began compiling an itinerary of sites of scientific interest to designate for conservation. In conjunction with BNM, specific attention was drawn to peatlands of "special merit."⁸⁸⁵ Then, in 1976, the government passed the Wildlife Act.⁸⁸⁶ This measure was informed by a European directive and legislated for the protection of threatened species and ecosystems. Speaking about the influence of international discourses and institutions in the passage of the Act, FG Minister for Lands, Thomas J. Fitzpatrick claimed,

⁸⁸² John Robert McNeill and Peter Engelke, *The Great Acceleration: An Environmental History of the Anthropocene since 1945*, De Gruyter eBook-Paket Geschichte (Cambridge, Massachusetts London, England: The Belknap Press of Harvard University Press, 2016).

⁸⁸³ Meadows, *The Limits to Growth*.

⁸⁸⁴ Warde, et al, *The Environment*, 50.

⁸⁸⁵ T. A. Barry, "Environment Protection and the Bogs of Ireland," 20.

⁸⁸⁶ "Wildlife Act, 1976." Irish Statute Book.

<https://www.irishstatutebook.ie/eli/1976/act/39/enacted/en/html?q=wildlife>

“nature conservation is a subject which is nowadays receiving increasing attention from the various international organisations, both governmental and non-governmental, whose mandate includes the protection and management of the environment. In the environmental programmes of inter-governmental agencies like the United Nations, the EEC and the Council of Europe, nature conservation is given a prominent place and the activities of these organisations in this sphere are of considerable interest to Ireland as a member State.”⁸⁸⁷

The issue of environmental protection was one in which Ireland, at least rhetorically, could align itself with international movements and legitimise its position as a globally significant and influential state. Scholars of Irish environmental governance argue that although European frameworks and international discourses had a significant impact in re-framing beliefs in Ireland about the value of the non-human environment, developmental imperatives often prevailed in direct contradiction to environmental commitments.⁸⁸⁸

Within this multidimensional context of emerging environmental consciousness and international pressures for the introduction of environmental governance mechanisms, peatlands became a salient site for negotiating new meanings and claims about the value of nature. They gained increased attention as potential sites of scientific importance and natural beauty. In 1971, the Ramsar Convention was the first international collaboration that recognised the value of wetlands as habitats for migrating birds and important ecosystems for hydrological and climatic

⁸⁸⁷ Thomas J. Fitzpatrick speaking in Houses of the Oireachtas, “Wildlife Bill, 1975: Second Stage. – Seanad Éireann (13th Seanad),” text, May 20, 1975, Ireland.

<https://www.oireachtas.ie/en/debates/debate/seanad/1975-05-20/3>.

⁸⁸⁸ See Jane O’Mahony, “‘Europeanisation as Implementation’: The Impact of the European Union on Environmental Policy-making in Ireland,” *Irish Political Studies* 22, no. 3 (September 2007): 265–85; and Bernadette Connaughton, “The Politics of Environmental Policy,” in Rees et al, *Europeanisation and New Patterns of Governance in Ireland*, 122-144.

stability.⁸⁸⁹ This convention united conservationists and scientists in a process of designating wetlands of international importance. This process of scientific valuation was necessitated by ecological peatlands research.

In the 1970s, two strands of environmental thought emerged with regard to Ireland's peatlands. On the one hand, a "sensible utilisation" approach advocated by ecologists incorporated the scientific properties of peatland ecosystems. This approach to peatland protection reflected what economic historian Joan Martinez-Alier describes as the "gospel of eco-efficiency."⁸⁹⁰ Since bog ecology had emerged within and through industrial extraction, its association with the economic imperatives of growth and expansion was in tension with the overall desire for conservation. As such, the language of eco-efficiency facilitated an arrangement where preservation could co-exist with continued extraction.

Concurrent with this sensible utilisation approach, ecologists and communities began to articulate the value of peatlands in terms of their aesthetic beauty. Martinez-Alier describes this strand of environmentalism as "the cult of wilderness."⁸⁹¹ In this framing, nature is understood as sublime wilderness and is thus worthy of preservation free from human imposition or development. In the case of peatlands, the invocation of wilderness as a positive attribute marked a significant transition from earlier ways of thinking.

Tom Barry, in an article in the same edition of *The Capuchin Annual* in 1973, articulated the urgent need for peatland protection. He wrote,

⁸⁸⁹ Katja Bruisch and Liesbeth Van De Grift, "3 Reclaiming the Land: The Drainage Paradigm and the Making of Twentieth-Century Rural Europe," in *Living with the Land*, ed. Liesbeth Van De Grift, Dietmar Müller, and Corinna R. Unger (De Gruyter, 2022), 53.

⁸⁹⁰ Joan Martinez-Alier, *The Environmentalism of the Poor: A Study of Ecological Conflicts and Valuation* (Northampton, MA: Edward Elgar Publishing, 2002), 5.

⁸⁹¹ Martinez-Alier, *The Environmentalism of the Poor*, 1.

“[peatlands] are among the greatest and most clearly irreplaceable of our natural national treasures – storehouses of living plants, plant associations, and peat-types of the greatest interest and value. Surrounded as they are by dangers of many kinds, with every advance in technology and every increase in population-mobility posing new potential threats to them, it seems clear that they could soon become down-graded if steps were not taken, officially and cooperatively, to preserve the best possible examples of each main kind.”⁸⁹²

Following on from the objectives of Project Telma, the core demands of ecologists at this time were the preservation of a representative sample of peatlands. This sample was imagined to include each ideal type which had been identified through the years of ecological field work and research.

In the article, Barry invoked the historical significance of BNM’s development. Evoking the improvement discourse of the nineteenth century, he wrote, “thanks to faith *and* good works the bogs of Ireland, within one lifetime, can be seen to have improved as a natural resource, from having been a source of poverty to becoming a source of wealth.”⁸⁹³ He acknowledged the company’s contribution to industry and the economy but claimed that they now needed to demonstrate a new national leadership in the conservation of peatlands. Considering its increased extraction mandate in the 1970s, and its status as one of the largest owners of peatlands in the country, BNM was, from the beginning, an integral, if unwilling, participant in the peatland conservation discourse.

Industry and ecology remained deeply intertwined throughout the 1970s. This is evident in Moore and Bellamy’s groundbreaking 1974 book *Peatlands*.⁸⁹⁴ This work was a first comprehensive account of international peatlands research and included analysis of classification, hydrology, and formation of peatlands as a way to demonstrate their scientific value. The authors’ also addressed the accelerating stresses to which peatlands were subject. In this way, the book

⁸⁹² T. A. Barry, “Our Bogs,” *The Capuchin Annual* 40 (1973): 202 – 204.

⁸⁹³ Barry, 204.

⁸⁹⁴ Moore and Bellamy, *Peatlands*.

reflected the concerns surrounding *The Limits to Growth*. The authors wrote, “as man’s population grows and his cultural and industrial development continues at an accelerating pace, so his demands upon the natural resources of the planet increase yearly.”⁸⁹⁵ Their key contributions concentrated on the non-renewability of peat as a resource, as the rates of exploitation exceeded the rates of peat accumulation.

The authors advocated a more holistic approach to peatlands, what they called the “sensible utilisation” of peat.⁸⁹⁶ This approach included consideration of environmental externalities in overall economic calculations regarding peat use.⁸⁹⁷ It was the beginning of an attempt to embed conservation policies within extractive imperatives. This approach to nature protection was perhaps a continuation of the historical strategies employed by ecologists in order to collaborate with industrial actors. Like Barry, conservation in this case was framed within a sensible continuation of extraction. They wrote critically but measuredly about peat for energy use, claiming, “however sophisticated the process and efficient the calorific recovery, the current rate of destruction of the world’s peat reserves for power production must be regarded as excessive.”⁸⁹⁸ The symbiosis between industry and ecology meant that multiple, oppositional values and uses of peat had to be understood simultaneously. As part of this, they too recommended the preservation of some remaining ideal types of peatlands alongside a slower pace of extraction.

Within the international peat community, the influence of international environmental concerns was clear in the proceedings of the 1976 International Peat Congress in Poznan. These included a session titled “Peat and Peatlands in the Natural Environment Protection[sic].”⁸⁹⁹ Within

⁸⁹⁵ Moore and Bellamy, 185.

⁸⁹⁶ Moore and Bellamy, 198.

⁸⁹⁷ Moore and Bellamy, 198.

⁸⁹⁸ Moore and Bellamy, 203.

⁸⁹⁹ *Peat and Peatlands in the Natural Environment Protection*, vol. 1, Proceedings of the Fifth International Peat Congress (Poznan, 1976).

this session, papers covered the conservation of peatlands and the impacts of human activities like drainage, agriculture, forestry, and industry on peatland degradation. Tom Barry was in attendance and presented a paper titled “Environment Protection and the Bogs of Ireland.”⁹⁰⁰ In it, he continued to strike the balance between the need for industrial development to continue in the interest of “man’s welfare” and the need to preserve samples of remaining intact bogs “to show future generations the origin and basis of the peat industry.”⁹⁰¹ While Barry demonstrated the persistent entanglements between industry and ecology, he also addressed the Board’s international responsibility towards the conservation of peatlands within Telma and IUCN frameworks.

Barry’s paper marked a departure from a purely scientific argument for the value of peatlands. He introduced a framework within which peatlands could be envisioned as sites of natural heritage and beauty. He argued, “good examples of the bogs of Ireland are worth preserving for their wild beauty alone.”⁹⁰² This invocation of wildness as aesthetically valuable was a break from previous wetlands discourses, wherein wildness had been equated to wasteland and used to justify extraction. Of bogs, he wrote, “beautiful they are in the serenity of their solitudes, where the call of the curlew, or the splashing of the hare making off through a maze of pools serves only to accentuate the peaceful silence. Their treelessness is the essence of their beauty.”⁹⁰³ Barry invoked the material characteristics of peatlands which had for centuries been perceived as problematic, barren, and devoid of beauty, and encompassed these features within a romantic idea of wilderness.⁹⁰⁴

⁹⁰⁰ T. A. Barry, “Environment Protection and the Bogs of Ireland,” 17–35.

⁹⁰¹ Barry, 17.

⁹⁰² Barry, 24.

⁹⁰³ Barry, 25.

⁹⁰⁴ William Cronon, “The Trouble with Wilderness; or, Getting Back to the Wrong Nature,” in *Uncommon Ground: Rethinking the Human Place in Nature* (New York: W. W. Norton & Co., 1995), 69–90.

By 1980, the urgency to protect examples of intact bogs was especially pronounced in Ireland, which the previous years of research had revealed to contain some of the few remaining examples of intact raised and blanket bogs in Europe. At the request of the European Commission, Roger Goodwillie, who had worked for AFF since the 1960s, compiled a report on the status of European peatlands. He wrote a succinct overview,

“peatland is a dominant feature in many northern and western countries. [...] It has considerable economic value where it is found as well as being valuable for amenity and recreation. It has been modified extensively by the extraction of peat itself, by agriculture and by afforestation. In several countries natural peat areas have been virtually destroyed and the remaining sites are suffering severe pressures.”⁹⁰⁵

Goodwillie’s comment reflected the emergent appreciation for peatlands as sites of amenity and recreation within wider economic understandings of their value. He furthermore represented the perspective of the European Commission that remaining intact peatlands should be protected.

This European pressure had been felt by the management of BNM who, in 1978, donated three sites to the Irish state for conservation totalling approximately 870 acres. These were Pollardstown Fen, Raheenmore, and Redwood.⁹⁰⁶ The details of this donation were featured in a widely circulated press release that included information about other aspects of the Board’s activities like sales, production, and consultancy.⁹⁰⁷ This inclusion of conservation within overall considerations of the organisation of BNM indicated a new priority for the Board, at least publicly.

⁹⁰⁵ Roger Goodwillie, “European Peatlands,” Nature and Environment Series (Strasbourg: Council of Europe, 1980), 2.

⁹⁰⁶ Clarke, *Brown Gold*, 206.

⁹⁰⁷ Bord na Móna, “Bord Na Móna,” *Mayo News*, February 25, 1981: 2.

This press release described the significance of the vegetation and bird life found in these sites, invoking the habitat of the Greenland White Fronted Goose at Reheenmore bog.⁹⁰⁸

The efforts of Irish peatland conservationists were substantially bolstered through European, and particularly Dutch interests in Ireland. In 1982, An Taisce organised a Bog Conservation Week. This event brought together multiple stakeholders in both peatland conservation and extraction. These included Dutch peatlands researcher Dr Matthijs Schouten, ecologist Frank Mitchell, and Lewis Rhatigan, then managing director of BNM. In Schouten's address, he argued that although BNM had donated peatlands for extraction, a lack of national governance mechanisms constrained the full protection of the sites.⁹⁰⁹

Through the proceedings of the week, the Irish Peatlands Conservation Council (IPCC) was established. One of the leading figures in the founding of this organisation was J.J. Moore. Along with colleagues, Schouten formed the Dutch Society for the Preservation of Irish Peatlands in 1983. Later that year, at the initiation of a Dutch M.E.P., the European Parliament passed a resolution on the protection of Irish bogs.⁹¹⁰ Perhaps the most succinct explanation for the Dutch interest in Irish peatlands was articulated by ecologists Hans Joosten and Clan Timmer in their 1987 report on a research trip they had conducted in Ireland.⁹¹¹ They wrote, "it's our Dutch experience, that, once paradise is lost, it can only be regained at high costs, and even then only superficially [...]"⁹¹²

Despite increasing pressure for the protection of intact and undrained peatlands, the urgency of the need for this protection was not reflected in the implementation of conservation

⁹⁰⁸ Bord na Móna, "Bord Na Móna," 2.

⁹⁰⁹ Daniel L. Kelly, "Developing the Bogs," *Irish Press*, March 22, 1982: 8.

⁹¹⁰ "Dutch M.E.P. Worried about Irish Nature," *Waterford News and Star*, August 18, 1982

⁹¹¹ Hans Joosten and Clan Timmer, "Irish Bogs: Not Any Moor!" (Utrecht: Staatsbosbeheer Utrecht, 1987).

⁹¹² Joosten and Timmer, 6.

efforts. This was demonstrated by ecologists J. B. Ryan and J. R. Cross in a paper they presented at the 1984 International Peat Congress in Dublin. In their paper, titled ‘The Conservation of Peatlands in Ireland,’ they outlined the limitations of peatland conservation over the previous ten to fifteen years in Ireland.⁹¹³ The authors explicitly highlighted the multiple interests involved in reimagining peatland futures. They echoed Schouten in their assertion that although rhetoric and commitments around conservation had dramatically increased since 1970, this was constrained by ineffective governance mechanisms and the continued industrial extraction as part of the Third Development Programme.⁹¹⁴ They brought the consequences of this extraction into sharp relief. Between 1974-1984, they claimed, “turf cutting activities have affected 34,750 ha. (3,861 ha/year) or approximately 5.3% of all the unmodified bog in the country. Of all the different bog types the midland type has been the most severely affected declining by approximately 31,024 ha (46%).”⁹¹⁵ They concluded that “it is obvious from such figures that the future of peatland conservation in Ireland is bleak unless effective methods for preventing exploitation of the most outstanding sites can soon be found.”⁹¹⁶

In the absence of robust national governance mechanisms, public campaigns and activist groups began to respond to the deteriorating state of peatlands. In this way, communities who were experiencing the immediate effects of peat extraction and the loss of natural habitats to cutaway bog, organised alongside national environmental groups and ecologists. Martinez-Alier sees this kind of organisation as part of a third “current” of environmentalism, “the environmentalism of the poor.”⁹¹⁷ This public engagement was clear in articles that ranged from reports on European

⁹¹³ J. B. Ryan and J. R. Cross, “The Conservation of Peatlands in Ireland,” in *Survey, Classification, Ecology and Conservation of Peatlands*, vol. 1 (Seventh International Peat Congress, Dublin, 1984), 388–406.

⁹¹⁴ Ryan and Cross, 399.

⁹¹⁵ Ryan and Cross, 394.

⁹¹⁶ Ryan and Cross, 400.

⁹¹⁷ Martinez-Alier, *The Environmentalism of the Poor*, 10-14.

parliamentary debates about peatland conservation in local and regional newspapers, to the concerns of local shooting clubs over the impacts of extraction on wildlife.⁹¹⁸ One of the most highly publicised conservation campaigns in the 1980s was around Clara Bog in County Offaly.

The raised bog at Clara was owned by BNM and partially drained in the early 1980s to facilitate extraction. The Irish Wildlife Federation initiated a scientific examination of the site at Clara and, in collaboration with peatland ecologists, including David Bellamy, concluded that Clara should be considered a site of international interest. Speaking in 1984 to RTÉ, Bellamy described Clara as “a bog which is totally unique, there’s no one like it anywhere else in the world.”⁹¹⁹ Local development groups as well as international and national environmental organisations put pressure on BNM and the Irish government to cease drainage and establish Clara as a site of conservation.⁹²⁰ This case was the beginning of public participation in peatland protection organising, and demonstrated the effectiveness of this kind of pressure in affecting action.

The contestation over the appropriate use of Clara bog also highlighted the challenges for industry and ecology in the 1980s. Speaking to RTÉ, then managing director of BNM, Paddy McEvilly described the dilemma for the peat industry. He claimed that they were under pressure to expand their industrial capacity while simultaneously contributing to nature protection.⁹²¹ He called this a “duality of values” that required “reconciling these conflicting demands and coming to

⁹¹⁸ “Dutch M.E.P. Worried about Irish Nature,” *Waterford News and Star*, August 18, 1982; Seán MacConnell, “Save the Bogs ... and Help the Game,” *The Irish Press*, January 18, 1984.

⁹¹⁹ “Bord na Móna Hand Over Bog,” RTE, January 17, 1984.
<https://www.rte.ie/archives/2019/0103/1020125-conserving-lough-boora/>

⁹²⁰ “Will Clara Bog Drainage Be Stopped?” *Westmeath Topic*, April 26, 1984.

⁹²¹ “Bord na Móna Hand Over Bog,” RTE, January 17, 1984.
<https://www.rte.ie/archives/2019/0103/1020125-conserving-lough-boora/>

a consensus on them.”⁹²² The primary argument from BNM at the time against the conservation of peatlands, and Clara in particular, was the projected job losses which would be incurred.⁹²³

In 1987, despite its socio-economic concerns, BNM transferred 1150 acres of the bog at Clara to the state for conservation.⁹²⁴ The government, through the National Wildlife Service, recognised Clara’s status as scientifically and internationally significant and declared it a nature reserve.⁹²⁵ The Minister of State of the Department of Finance, Noel Tracey, was the state’s representative in the ceremony where Clara officially changed hands. In his address he challenged the previous assumptions about the abundance of peatlands, claiming, “the truth is that bogs are very fragile ecosystems and are easily enough disrupted and destroyed – at least from a scientific and conservation point of view.”⁹²⁶ This perspective was a significant departure from decades of state investment in extraction.

The example of Clara demonstrates the multidimensional processes at work in the conservation of peatlands at the time. National and international scientific and public pressures were central in reimagining the value of peatlands beyond their industrial capacity. This new perspective, while visible within the parameters of BNM and the government, was limited in its impact due to the persistence of the extractive imperative which continued to shape modes of engagement with bogs.

The Clara Bog campaign further revealed a new potential for peatland futures beyond cutaway, or depletion. The area of Clara which had already been drained was restored by members

⁹²² Paddy McEvilly, “Bord na Móna Hand Over Bog.” RTE, January 17, 1984.

<https://www.rte.ie/archives/2019/0103/1020125-conserving-lough-boora/>

⁹²³ “Will Clara Bog Drainage Be Stopped?” *Westmeath Topic*, April 26, 1984.

⁹²⁴ “Clara Bog Handed over to State,” *Offaly Independent*, September 25, 1987.

⁹²⁵ “Of ‘International Scientific Importance,’” *Offaly Topic*, September 24, 1987; “Clara Bog Handed over to State,” *Offaly Independent*, September 25, 1987.

⁹²⁶ “Clara Bog Handed over to State,” *Offaly Independent*, September 25, 1987.

of the Wildlife Trust and the local community by filling in the drains which had been dug there.⁹²⁷ This practice of repair and restoration enabled the water table to rise again in the drained bog and facilitate the regrowth of peat-forming plants like sphagnum. Restoration entered the discourse as a practice of repair in opposition to the widespread destruction of peatlands.

VII. Wise Use

Despite the success of the Clara bog campaign, conservation of peatlands remained a lesser priority of state and industrial actors. In *Peatlands*, Moore and Bellamy had articulated a *sensible utilisation* framework that considered the environmental consequences of human interventions into peatlands within wider economic frameworks.⁹²⁸ Balancing the “duality of values,” as McEvilly had called it, required an integrated approach to resource management that engaged different stakeholders with conflicting beliefs about the value and use of peatlands.⁹²⁹ Considering the simultaneous interests of extraction, agriculture, and conservation, more holistic approaches to the governance of these spaces began to be developed.

The beginnings of this way of thinking about peatlands were visible in a 1984 report, titled *Irish Bogs: A Case for Planning*.⁹³⁰ The report was produced by an interdisciplinary team of researchers from the Catholic University Nijmegen in the Netherlands. This was the university with which Dr Matthijs Schouten was affiliated. According to the authors, the report’s objective was to understand and address the tensions between peatland exploitation in Ireland and the imperative for conserving the limited remaining sites of intact bogs. The authors defined

⁹²⁷ “Of ‘International Scientific Importance,’” *Offaly Topic*, September 24, 1987, 1.

⁹²⁸ Moore and Bellamy, *Peatlands*, 198.

⁹²⁹ McEvilly, “Bord na Mona Hand Over Bog.” RTE, January 17, 1984.

⁹³⁰ H. Van Eck et al., “Irish Bogs: A Case for Planning,” (Nijmegen: Catholic University Nijmegen, 1984).

exploitation as the “utilization of peatlands to the benefit of mankind, as a rule economic in perspective, and as a consequence of which the original character of the peatland is altered.”⁹³¹ These anthropogenic activities were understood to include peat extraction, forestry, *and* agriculture.⁹³²

The major contribution of this report was a comprehensive overview of the perspectives of the multiple stakeholders, and suggestions for policy frameworks through which to manage these competing interests. The authors also applied ecosystem thinking to outline the implications of peatland exploitation. These included “biological implications” such as irreversible damage to peatland ecosystems and disruptions to regional hydrology.⁹³³ Beyond these more localised impacts, however, the report recognised the global implications of peatland destruction, citing the potential “negative impact on the world’s carbon balance.”⁹³⁴ This invocation of the carbon implications of peatland extraction added another layer of complexity to understandings of the imperative of peatland protection. It simultaneously embedded Ireland’s peatlands within a global environmental system, implying the far-reaching negative implications of peat extraction.

The report also incorporated ideas about landscape and the psychological and identity-based implications of the “visual experience of changing landscape features.”⁹³⁵ Through this lens, the authors articulated a constructivist understanding of natural resources, arguing,

⁹³¹ Van Eck et al., v.

⁹³² Van Eck et al., i – ii.

⁹³³ Van Eck et al., xiv.

⁹³⁴ H. Van Eck et al., “Irish Bogs: A Case for Planning” (Nijmegen: Catholic University Nijmegen, 1984), Greifswald Mire Library: xiv. This report was situated within wider discourses about climate and the greenhouse effect. See Paul Warde, Libby Robin, and Sverker Sörlin, *The Environment: A History of the Idea* (Baltimore: Johns Hopkins University Press, 2018), 117–119.

⁹³⁵ Van Eck et al., xvii.

“something is not a resource until Man knows of its existence, unless he assesses it as being of value to him, and unless he has the technology to avail of it. Resources may be created as human wants and abilities change, resources may also cease to exist, through changes in wants and technology and through substitution of other products as well as through destruction by consumption or misuse.”⁹³⁶

This understanding took into consideration not only the history of the ways of valuing peatlands, but the consequences of the historical choices to exploit them. This multidimensional assessment of the ways of using peat in Ireland thus facilitated a means for managing their future use that was cognisant of the multiple meanings of the value of peat and the ways that these meanings fluctuated amongst and between various stakeholders.

In the 1980s, human engagement with peatlands encompassed an increasing number of processes, including extraction, conservation, and cutaway development. These ways of engaging with peatlands necessitated constantly evolving approaches and methods of analysis, as well as the collaboration between greater numbers of actors, agencies, and organisations. This was clear in the proceedings of the seventh International Peat Congress which was held in Dublin in 1984.⁹³⁷ Tom Barry, by this time retired from BNM, and D. M. Synott presented a paper about peatland formation that focussed on the succession from fens to raised bogs. Despite no longer being affiliated with the Board, this research was enabled through the assistance of BNM, The Department of Agriculture, and AFT.⁹³⁸

⁹³⁶ Van Eck et al., 322.

⁹³⁷ *Proceedings of the Seventh International Peat Congress*, 4 vols. (Dublin, 1984).

⁹³⁸ T. A. Barry and D.M. Synnott, “Bryophytic Succession in Woody Fen and Other Peat Types in Two Hochmoor in Central Ireland,” in *Survey, Classification, Ecology and Conservation of Peatlands*, vol. 1 (Seventh International Peat Congress, Dublin, 1984), 1–26.

Another paper was presented at the Congress by Jerry Clark, a research scientist from a US company named Science Applications Inc.⁹³⁹ This was titled “Mapping Harvested Peat Bogs in Ireland Using Spaceborne Radar Imagery” and was intended to demonstrate the value of satellite imagery for peatland monitoring. He wrote, “as in all resource management situations, the task of monitoring the resource, much less mapping it accurately, is a costly, time consuming activity.”⁹⁴⁰ Clark’s paper demonstrated the dual function of new technologies of surveillance. On the one hand, they were incredibly valuable for resource development and management. But they also provided new means to identify the degradation of peatlands. Robert Hammond also presented a paper which detailed the results of his 1978 peat soils study.⁹⁴¹ These three papers demonstrate the increasing diversity of approaches and technologies being used to study and analyse peatlands. And, while they all contributed new approaches or knowledge to the study of cutaway and industrial peatlands, by virtue of their intentional or unintentional attention to the contemporary consequences of extraction, they emboldened conservation discourse.

Peatlands took on multiple meanings and materialities for different stakeholders. Consultation with these stakeholders started to become a feature of peatland management in the 1980s. In 1985, Ireland ratified the Ramsar convention, and in 1987, the convention was updated to include *wise use* as a guiding framework for peatland governance.⁹⁴² According to the definition established by the IUCN, “the wise use of wetlands is their sustainable utilisation for the benefit of

⁹³⁹ Jerry Clark, “Mapping Harvested Peat Bogs in Ireland Using Spaceborne Radar Imagery,” in *Survey, Classification, Ecology and Conservation of Peatlands*, vol. 1 (Seventh International Peat Congress, Dublin, 1984): 93–119.

⁹⁴⁰ Clark, 93-94.

⁹⁴¹ R.F. Hammond, “The Classification of Irish Peats as Surveyed by the National Soil Survey of Ireland,” in *Survey, Classification, Ecology and Conservation of Peatlands*, vol. 1 (Seventh International Peat Congress, Dublin, 1984): 168–87.

⁹⁴² Maltby and Barker, *The Wetlands Handbook*, 15.

mankind in a way compatible with the maintenance of the natural properties of the ecosystem.”⁹⁴³ This way of thinking about the management of the non-human environment became ubiquitous in national and international discourses and governance.⁹⁴⁴

The proceedings of a 1988 workshop demonstrate the mechanics of the wise use approach in relation to peatlands in Ireland. This two-day workshop held at the RDS was titled “The Utilisation of Irish Midland Peatlands” and brought together a variety of peatland stakeholders.⁹⁴⁵ These included representatives from BNM, the Department of Agriculture, the Forest Service, workers’ unions, peat ecologists, academics, and the IPCC. The objective of the workshop was, “to produce coherent policies which would ensure the optimum benefit in the use of peatlands, bearing in mind both past research and present and future economic and social conditions.”⁹⁴⁶

This workshop, then, through multi-stakeholder involvement, was intended to take an holistic view of the constellation of peatland uses and devise policies wherein the most efficient and beneficial uses were adopted. Despite the participation of an increased range of actors in this process, what constituted as ‘efficient’ and ‘beneficial’ were ultimately determined by the Board and the state representatives. This multistakeholder, wise use approach, while taking into consideration a wider range of perspectives on the value of peatlands, largely reproduced existing power dynamics.

⁹⁴³ Maltby and Barker, 15.

⁹⁴⁴ Warde et al. discuss the implications of the Brundtland Commission’s publication of *Our Common Future* in 1987. This report brought the term “sustainable development” into mainstream political and public discourses. In Warde, et al, *The Environment*, 122-125.

⁹⁴⁵ R. C. Mollan and Royal Dublin Society, eds., *The Utilisation of Irish Midland Peatlands: The Proceedings of a Workshop Held in the Royal Dublin Society from September 21-24, 1988*, Royal Dublin Society Seminar Proceedings, no. 3 (Dublin: The Society, 1989).

⁹⁴⁶ William Dick, ‘Introduction,’ in Mollan, *The Utilisation of Irish Midland Peatlands*, 9.

Loss was a key theme of the proceedings. For ecologists, the loss of intact peatlands was an urgent issue that required immediate commitment from industry to address. For representatives from the Board, the exhaustion of peat resources from the bogs was another kind of loss. The winding down of peat-works, and the subsequent job losses had produced “a period of bereavement.”⁹⁴⁷ These crises motivated the increased attention to the issue of conservation as well as the future use of cutaway.

In the first Highlight Paper, ecologist at the Ulster Wildlife Trust, Palmer Newbould outlined the urgency of the situation with regard to conservation.⁹⁴⁸ He identified the changing attitudes about the value of peatlands and emphasised the centrality of peat ecologists to this shift. He further demonstrated a constructivist perspective on the historical utilisation of peatlands in Ireland. He said,

“bogs were wild remote places and people conceived of them as unproductive and virtually useless, and also dangerous. Therefore it was regarded as a good thing to conquer them, to reclaim them. There was a sort of frontiersman ethos. And, by any standards, the conquering of the bogs by Bord na Móna and its predecessor was a great achievement. It represented the creation of a resource where none existed before.”⁹⁴⁹

Newbould’s perspective acknowledged the significance of the industrial heritage of the Board and its historical value for Irish society and economy. His language also reflected the improvement and developmentalist narratives which had been employed at the inception of the Irish peat industry. Despite this economic and social function, Newbould argued that the contemporary realities and knowledge of the ecological consequences of extraction necessitated

⁹⁴⁷ Dick, 10.

⁹⁴⁸ Palmer Newbould, “First Highlight Paper: Historical and International Perspective,” in Mollan, *The Utilisation of Irish Midland Peatlands*: 15 – 25.

⁹⁴⁹ Newbould, 22–23.

new modes of engagement with peatlands through conservation. Speaking to the urgency of the time, he wrote, “I feel we have almost run out of time on the Midland raised bogs.”⁹⁵⁰

In the second Highlight Paper, managing director of BNM, Eddie O’Connor, presented an overview of the economic benefits of the company both on a national and regional scale.⁹⁵¹ Between the impact of the Board’s work on the national balance of payments, as well as the financial investment in the midlands region through wages, O’Connor argued that the crises facing the Board would have significant consequences if solutions were not found. He was reassuring in his assertions that innovation would guarantee the future of the company. He claimed, “we have to innovate, we have to develop our marketing skills, we have to experiment, we have to develop a brand of entrepreneur who will not rest until he has set up new businesses and is trail blazing Irish peat as profit across the world stage.”⁹⁵²

While the practical outcomes of this workshop were limited, it provides a useful example to understand the dynamics of the multi-stakeholder governance of peatlands which was taking shape at this time and would continue to frame human-peatland interactions. There was evidence of some buy-in from industry towards the protection of peatland sites. The urgency of this was underscored by the repeated insistence of ecologists that the continued exploitation of peatlands by industrial and agricultural means was contributing to the wider environmental crisis. However, BNM’s economic significance, nationally and regionally, was continuously prioritised in considerations of present and future wise use of peatlands.

Throughout the twentieth century, ecological research was instrumental in challenging and reframing perceptions and beliefs about peatlands. This research was entangled with extractive objectives but nonetheless, through national and international networks and organisations, was

⁹⁵⁰ Newbould, 24.

⁹⁵¹ Eddie O’Connor, ‘Second Highlight Paper: Economics of Peat Exploitation – Present and Future,’ in Mollan, *The Utilisation of Irish Midland Peatlands*: 27–32.

⁹⁵² O’Connor, 32.

significant in contributing a new framework for the valuation of bogs as landscapes worthy of protecting. The ultimate limitations of the conservation discourse in generating radical transformation were clear in the ways that ecosystems thinking emboldened the wise use frameworks of peatland management.

In 1994, Matthias Schouten wrote a paper titled “Nature Conservation in Ireland: A Critical Decade.”⁹⁵³ In this paper, he made an economic argument in favour of peatland protection. He warned that the financial penalties of ecosystems collapse were worth considering and argued for the inclusion of these externalities in industrial and economic development. He also wrote, “nature is more than wilderness or wasteland which is best used when it is developed for human activities or for the supply of valuable resources such as minerals or fuels. It should be realised that what is left is also a commodity which supplies numerous goods and services to human society.”⁹⁵⁴ This language speaks to the persistence of the eco-efficiency approach to peatlands.

Schouten was an instrumental figure in the history of Irish peatland protection and restoration. His work with the DSPIP was crucial in contributing to the more-than-economic valuations of peatlands in Ireland. This paper, however, reflected the constraints on environmentalists in Ireland at the end of the twentieth century. Despite the introduction of the EU habitats directives (1992), and the later emergence of grassroots conservation campaigns, peatlands continued to exist within economic considerations.⁹⁵⁵ The economic value of BNM and the Irish agricultural industry was

⁹⁵³ Matthijs G. C. Schouten, “Nature Conservation in Ireland: A Critical Decade,” *Biology and Environment: Proceedings of the Royal Irish Academy* 94B, no. 1 (1994): 91–95.

⁹⁵⁴ Schouten, 92.

⁹⁵⁵ EU Habitats Directive, <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A01992L0043-20130701>; “The Abbeyleix Bog Project: A Model for Community-base Peatlands Restoration and Management,” UN Decade on Restoration. <https://www.decadeonrestoration.org/stories/abbeyleix-bog-project-model-community-based-peatlands-restoration-and->

such that conservationists had to operate using the limited frameworks and language that was available to them. The legacies of these industrial and economic imperatives, and the limitations of environmental governance continue to shape human-peatland entanglements today.

management#:~:text=The%20project%20stemmed%20from%20the,and%20restoring%20the%20local%20p
eatlands.

Conclusion

Peatlands: Past, Present, and Future

“Today marks the formal end to the company’s association with peat harvesting, as we move on to tackle the critical challenges concerning climate change, energy supply, biodiversity and the circular economy.”⁹⁵⁶

In 2021, Bord Na Móna ceased all peat extraction activities on their remaining operational bogs.⁹⁵⁷ Chief Executive Tom Donnellan outlined the company’s priorities for the coming decades as it transitions from a fossil fuel company to a “climate solutions company.”⁹⁵⁸ In its new model of *sustainable development* the company, according to the statement released on its website, would now focus on its renewable energy division which included solar and wind generation, as well as its recycling business. Furthermore, the restoration of degraded peatlands for biodiversity and carbon capture would be considered a key priority.

Donnellan’s remark highlights the continuity of beliefs about BNM, its work, and its responsibilities. Energy security still formed a significant part of the company’s objectives. Where previously peat had provided the solution to this problem, renewables were now transplanted onto

⁹⁵⁶ “Bord Na Móna Announce Formal End to All Peat Harvesting on Its Lands,” Bord Na Mona, January 15, 2021, <https://www.bordnamona.ie/bord-na-mona-announce-formal-end-to-all-peat-harvesting-on-its-lands/>.

⁹⁵⁷ Ibid.

⁹⁵⁸ Ibid.

the bogs, like the power stations before them. And, despite extraction being entirely mechanised since the 1970s, and the clearly finite nature of peat, “harvesting” remained the term associated with the Board’s former activities. In a way, Donnellan’s remarks also reflected the realisation of Eddie O’Connor’s vision at the 1988 workshop. BNM *had* developed a brand of entrepreneur that was able to transition the company towards a new energy future.

But the scars of extraction remain. In the ecological devastation of the cutaway bogs that were left behind. In the carbon emitting from drained bogs and reclaimed agricultural land. In the lines of drains cutting across vast expanses of midland and western bogs, and abandoned railway tracks. In communities for whom the “just transition” remains elusive. In moving towards its new future, BNM, and the Irish state more broadly, must reflect upon its past.

This thesis demonstrates that peatlands were uniquely situated for the projection of meanings and values by the state, communities, and scientists in the twentieth century. In less than one hundred years peatlands transformed from wastelands to national resources to endangered ecosystems. These different understandings of peatlands emerged in response to the fluctuating circumstances of Ireland’s independence, national development, the globalisation of energy supply chains, and the internationalisation of environmental governance.

The Irish peat industry emerged out of longer legacies of state interest in peatlands. From the improvement discourse of the Bogs Commission in the early nineteenth century, to the imperatives of electricity in the early twentieth century, the meaning-making and knowledge-production about bogs that occurred in the pre-independence era carried through in the mindsets and actions of Irish state actors. An over-arching desire to remake peatlands into valuable resources underpinned these engagements with peatlands. In the context of the Irish Free State, peatlands served as a means through which to address issues of national development, economic growth, and, crucially, represented an idea of the nation that was based on traditional Gaelic subsistence practices, in opposition to British rule, and coal. This tension between national energy sovereignty and dependency on the legacies of imperial resource making shaped the origins of the peat

industry. The top-down construction of meanings about peatlands was a crucial component in the formal establishment of the industry.

The systems and culture of peat extraction transformed from the 1930s onwards. While the historical peat harvest had necessitated co-operative labour and intergenerationally reproduced practices and customs of extraction, the introduction of machinery ruptured these human-nature entanglements. The analysis of these changing systems of extraction demonstrates how the top-down policy directives of the state were mediated through new knowledges in response to changing peat landscapes. Certain aspects of the older system of extraction persisted in the form of community building, cooperation, and language. The realities of industrial peat extraction involved increased fossil energy use, productivity targets, and ecological degradation.

Peat became the primary fuel for electricity generation between 1950 and 1965. The changing materiality of peat in the process of electricity generation allowed it to expand beyond the geographical limits of its production and become embedded in nationwide networks of electricity transmission. Electricity provision emerged as a tool for development and economic growth. This materialised differently between the midlands and the west of Ireland. This internal geographical differentiation reinforced ideas of landscape and their value.

Peat also transformed within and through modernising domestic energy consumption. Peat fuel was a subsistence resource in rural Ireland that had national, cultural and symbolic associations. But it was also a fuel that required intensive labour to maintain. Bord na Móna attempted to distance peat from these material associations and instead remake it into a modern and efficient fuel. This process was responding to a changing domestic imaginary in Ireland. While the Board was successful in developing new peat fuel products, the consumption of domestic energy reveals the ways in which the new peat energy system relied on certain cultural touchstones like nostalgia, heritage, and tradition to remain viable in an increasingly competitive fossil fuel economy.

The implications of the peat energy system, visible by the 1970s in the emergent cutaway bogs, necessitated new visions of peatland futures. An emerging environmental consciousness alongside increased ecological knowledge production related to peatlands was such that conservation became a new framework through which to value peatlands. The legacies of energy production meant that peatlands were not easily dissociated from industrial considerations however, and so the contestation and collaboration between multiple peatlands stakeholders transformed in the 1980s towards a new system of governance, wise use.

This thesis has focussed on how the history of human ideas about peatlands has influenced ways of engaging and interacting with them. Peatlands absorb human assumptions and beliefs as easily as water. By centring these landscapes as sites of energy production within wider considerations of state-building, modernity, and environmental degradation, this research makes a number of contributions to the literature.

Peatlands acted as sites of colonial resource-making and as vectors of colonial legacies. They provide an important lens through which to understand the complexity of Ireland's relationship to Empire, and the Free State's inheritance of the frameworks of wasteland and improvement. This is most clearly visible in the endurance of the Bogs Commissioners maps and reports in the institutional and administrative mechanisms of Bord na Móna. The application of these colonial documents in national developmental goals embodies what Bresnihan and Brodie describe as "imperfect decolonisation."⁹⁵⁹ The state inadvertently inherited a colonial gaze through the incorporation of these materials into the project of peat exploitation.

Ireland's positionality as a frontier colony of the British Empire informed the logics of peat use up to and beyond independence. The centrality of coal to industrial development in England meant that peat fuel inherited a relational value that was based on the efficiencies and applications of coal. Despite the framing of the peat industry in the 1930s as a *national* industry, and an attempt

⁹⁵⁹ Patrick Bresnihan and Patrick Brodie, Forthcoming. *From the Bog to the Cloud: Dependency and Eco-Modernity in Ireland*. (Bristol University Press), chapter two, 4.

to disassociate Irish development from the use of British resources, industrial actors and engineers were preoccupied with finding ways to make peat more like coal through modifications to its material properties. The influence of the coal resource imaginary had material implications for Irish peatlands and the ways that they were imagined to be sites of industrial development. As the literature on the history of the industrial revolution demonstrates, the longer-term consequences of the transition from biomass to coal in England can be measured in terms of atmospheric carbon today. Ireland's peatlands are not exempt from these fossil legacies.

The history of the peatland imaginary complicates understandings of Irish resource nationalism. Nationalist visions of peatland development that emerged prior to the establishment of the Turf Development Board in 1936 were entirely responsive to the frameworks and governing principles of British rule. Participants in the construction of the industrial peat imaginary like William Kerr, and Hugh Ryan demonstrated a fluidity in approach that worked within and through the systems of imperial bureaucracy to disseminate research and industrial development strategies, despite their republican affiliations. Even Mac Piarais, in his vision of national resource development, co-opted the improvement discourse in his recommendations of the application of drainage and reclamation practices.

Peatlands therefore make visible the tensions inherent to conceptions of the Irish nation in the twentieth century. The historical modes of peat extraction and consumption were absorbed within a constructed Gaelic tradition that granted legitimacy to the Irish government and was preformed through the production of culture, language, and heritage. At the same time, the industrial peatland imaginary conferred visions of technological progress, industrialisation, and social and economic modernisation onto peat landscapes as part of wider state developmentalist imperatives. The mobilisation of peat energy can be understood through the state's simultaneous invocations of the past and the future of the nation. While the persistence of peat within the Irish mindset as a source of tradition and culture is visible in contemporary debates about turbary rights, this thesis shows that the implications of industrial peat development had more insidious and

lasting impacts and entanglements with Irish life and culture through energy infrastructure and changing modes of consumption.

Peatlands functioned as sites for Irish engagement with transnational and international organisations and networks, as well as facilitating Irish leadership in international industrial development. The contemporary persistence of beliefs about peatlands as rural, marginal, and peripheral spaces neglects the historically persistent flows of knowledge and technologies between Irish peatland engineers, scientists, and workers and international industrial and scientific actors. These flows demonstrate that even during periods of Irish insularity, peatlands provided a space for transnational collaboration. These outlets for resources and knowledge persisted even in politically divisive times, like the Cold War. In this way, Ireland was able to position itself as a leader in peatland development which generated national and international prestige. Ireland's relatively late industrial development also attracted the attention of international conservationists, particularly Dutch ecologists for whom national peatland conservation was an impossibility. Peatland transnationalism connected European and international ruralities.

As a contribution to the field of energy history, this thesis demonstrates that globally peripheral fuels can significantly contribute to changing modes of energy consumption and the proliferation of fossil fuels. Peatlands provided a repository of fossil energy for the Irish government. Throughout the twentieth century, various administrations identified that energy was a critical priority for state development. Considering Smil's assertion that energy is used to "improve chances of survival and to enhance quality of life," it is worth reflecting on what this looked like for the Irish state.⁹⁶⁰ Survival, in its most basic sense, meant having sufficient energy for heat and light. As the expectations of what a good quality of life should look like changed, improved means of energy consumption were developed. But beyond these functional requirements, securing energy resources was central to the political survival of the state. Economic growth was a continuous challenge for governments of Ireland throughout the twentieth century. National energy

⁹⁶⁰ Smil, *Energy Transitions*, 1.

development was a means through which to stabilise the economy through a reduced balance of payments. Social development policies were also understood to be central to the survival of the state. Energy production was thus used to address regional and national underdevelopment. Finally, energy security was continuously framed as necessary for the survival of the state. National energy systems decreased dependencies on foreign energy sources and producers and made the state less vulnerable to disruptions to global supply chains.

Peat was the foundation of the Irish fossil energy regime. As this thesis asserts, peat provided an energetic pathway between traditional and modern ways of life in Ireland. This was clear in all aspects of the peat energy system. Peat fuel was the *energy source* in this system. The mobilisation of peat through extraction underwent a significant transformation throughout the twentieth century to encompass large-scale drainage and the introduction of fossil-powered machinery. The *conversion* of peat to electricity marked a significant “breakthrough” in terms of expanding the spatial parameters of the energy system. New materialities facilitated new geographies of energy use. New, modern *end uses* also emerged. Peat fuel and electricity became inputs in industrial developments alongside changing modes of domestic consumption as part of an Irish domestic modernity.

As a history of extraction, this thesis demonstrate that peatlands were not simply landscapes but also sites where human labour had to constantly negotiate with the more-than-human environment. The organisation of peat extraction in Bord na Móna bogs inherited many of the traditional associations with peat fuel and enhanced them through industrialisation. The entanglements between technologies, communities, and nature generated embedded relationships and dependencies that linked workers’ dignity, identity and stability to the fossil fuel regime. This case demonstrates the inherent instability of fossil resource extraction. In less than one hundred years the bogs were becoming exhausted. The industry, which had been positioned as a vision of future prosperity for the nation, was unable to sustain this promise.

Labour was a key component in the dissemination of the state’s visions for industrialisation. As active participants within the wider energy system, peat workers engaged in

new relationships with and to the non-human environment. Through these processes, people developed new expectations and beliefs about the value of peat relative to its presence or increasing distance from their day-to-day realities. As living standards changed, and particularly with the introduction of machinery for extraction the previously intimate relationships between people and peat were disrupted.

The utilisation of peat fuel for electricity production further demonstrates the fragility of the peat fuel system. Feedback between technologies and social expectations produced a logic wherein peat became more valuable when combusted for electricity. This development locked Ireland into a pattern of energy infrastructure development that required increasing inputs. Peat was insufficient to sustain the ever-increasing demands for power. While the power stations reflected national visions for development and prosperity, they were merely a pathway to increased coal and hydrocarbon consumption for the generation of electricity. This case demonstrates the challenge of supplying power on a national level through marginal or less energy intensive sources. This has implications for contemporary issues of energy crises and transitions.

The manifestation of the peat energy system within the domestic sphere introduces another dimension to considerations of energy transitions from the perspective of consumption. Considering these wider geographies of energy beyond the production level shows the complex dynamics at work between energy, culture, and labour in the home. The changing expectations and demands around what constitutes a better quality of life meant that consumption of energy intensified as consumers were increasingly distanced from the sources of their energy. Part of the modern domestic imaginary in Ireland was the erasure of work from ideas about domestic energy consumption. For peat, the associations of familiarity, comfort, and nostalgia drove the persistence of the fire in Irish homes alongside continued economic constraints. The domestic sphere is thus an important lens through which to understand energy transitions.

The longer association of peatlands with agricultural production also locked peatlands into post-extractive futures that were similarly fossil energy intensive. Making cutaway bog into fertile pastures required the utilisation of hydrocarbon rich nitrates and fertilisers. The reclamation of

cutaway bog not only extended the productive life of the bogs, but also extended their centrality within fossil-intensive systems of production.

Situating this research within wider narratives about energy transitions, it is important to identify that peat was already the primary fuel for domestic consumption in Ireland prior to industrialisation. This challenges narratives about transitions from organic to fossil, or renewable to non-renewable energy sources. While the scale and intensity with which peat was extracted and consumed increased, the system effectively was still centred on a familiar and ubiquitous fossil resource. As well as this, other primary fuels contributing to the Irish energy system prior to the development of the peat industry were hydropower and coal. Peat facilitated the increased use of secondary energy in the Irish economy, but this was part of a mix of primary energy inputs including both renewable and non-renewable types of fuel.

Therefore, this case demonstrates the ways that the intensification of peat extraction and consumption was made possible in part through the increasing use of other sources of fossil energy, namely coal and hydrocarbons. This addition of energy sources reflects Bonneuil and Fressoz's perspective on the history of energy additions.⁹⁶¹ The infrastructure of peat extraction necessitated increased hydrocarbon consumption to power machinery, rail networks, and transport vehicles. The efficiency of these other energy sources relative to peat, meant that they were increasingly utilised in new electricity power stations.

An integral part of the consolidation of the peat energy system was the recurring attempts by state actors to visually and spatially rationalise and standardise the more-than-human peatlands in order to more efficiently control nature and extract resources. This was evident at every stage in the development of the peat energy system where mapping, surveying, and experimentation were conducted. The production of maps in particular was an integral part of the process of energy development. The inclusion in this thesis of considerations of the realities of work on peatlands demonstrates that despite increasing rationalisation and standardisation principles being employed

⁹⁶¹ Bonneuil and Fressoz, *The Shock of the Anthropocene*.

by the state, through Bord na Móna, these principles were insufficient in exercising complete control over peatlands.

Peatlands occupy a complex position in the history of nature protection. Their construction as natural resources in the Irish mindset transformed them into productive spaces. They had always been productive spaces for subsistence extraction but efforts to rationalise and standardise their properties and processes detached them from the realities of their composition. The legacies of this attitude towards peatland control shaped the entanglements between ecology and industry, and pathways to contemporary peatland management approaches like ecosystems services and wise use principles.

In the conclusion to his four-part documentary about Ireland's peatlands, Irish writer Manchán Magan claimed,

“[. . .] a sod of turf is worth much more in the ground than it is in the fire. However, our relationship with the bogs is a complex one. We have been cutting and burning it for centuries, but it's clearly having a negative impact on the health of the planet. We all have to stop cutting turf; right down to the traditional domestic turf-cutter who's just trying to heat his home. If we want a future on this planet, we cannot continue burning fossil fuels and that includes turf.”⁹⁶²

This statement, and indeed the findings of this research, demonstrates that peatlands continue to act as a means through which to understand multiple temporalities. This thesis is not simply a declensionist narrative about the degradation of Ireland's peatlands, it is an integration of the ways of thinking about the past, present, and future that have always been central to ideas about the more-than-human peatland environments. The legacies of past interventions and indigenous

⁹⁶² Manchán Magan, “Todchaí na Portaigh,” *An Fód Deireanach*, TG4, April 28, 2022. (text translated from Irish).

<https://www.tg4.ie/en/player/play/?pid=6305330264112&title=Todhcha%C3%AD%20na%20Portaigh&series=An%20F%C3%B3d%20Deireanach&genre=Faisneis&pcode=611184>

customs are as present in cutaway bogs as the projected visions of the modern future that were applied to them in the twentieth century.

In line with this research, Magan's statement also reflects the fragility of fossil energy regimes and the threat of collapse. However, it also gestures to the adaptability and resilience of communities and the more-than-human environment in mediating energy transitions. These resiliencies are perhaps most evident at smaller scales of analysis, within the home, or in the establishment of communities of sphagnum within the ombrotrophic bogs.

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