

Sustainable bogs: Challenges in transition

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DECLARATION

I hereby declare that this thesis has not been submitted as an exercise for a degree at this or any other university. Except where otherwise acknowledged, it is entirely my own work. The library of Trinity College Dublin may lend or copy this thesis upon request.



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SUMMARY

In January 2021, Bord na Móna chief executive Tom Donnellan announced that the company had ended its peat production business. The closure of the industrial bogs has led to calls for a just transition for those affected. Just transition is the trade union movement's contribution to the environmental debate. As the world moves its reliance on fossil fuels to renewable energy, workers employed in extractive industries face the challenge of job loss. A just transition ensures that 'no one is left behind', while fully accepting that there are 'no jobs on a dead planet'.

This thesis is primarily concerned with Bord na Móna, the semi-state company responsible for the industrial extraction of peat from Irish bogs. It aims to critically examine geographic literatures pertaining to human/nature interactions and collect data from informed stakeholders concerning the changes in the peat industry through time. It also seeks to understand the role of the state in managing peat-for-energy transitions, and in so doing, identified the troubled turbary bogs to Special Areas of conservation conflict that arose following Ireland's adoption of the Habitats Directive in 1997. Lessons can be learned from prior transition when considering contemporary job loss from the bogs.

Using a qualitative, semi-structured interview approach, collected evidence suggests that instead of a sudden end, the Irish peat-for-energy sector has been in a long decline. Following its establishment in 1946, Bord na Móna evolved through three distinct phases until the mid-1980s where it found itself overstretched, indebted and outcompeted. 4,400 full-time and seasonal jobs were shed by 1992 with consequences for the wider midlands economy. Between 1993 and 2004, two briquette factories and five peat-fired power stations closed. Three new, albeit more efficient, peat-fired power stations were opened. In October 2018, 430 Bord na Móna employees were made redundant.

This research discovered that as Bord na Móna declined through time it has also been transitioning. Since the 1950s, efforts to repurpose cutaway bogs into productive landscapes have been underway. Numerous issues arose with each effort. Livestock were nutrient-deficient, grasslands expensive to convert and forestry unproductive. Use of cutaway for

amenity and biodiversity provision have proven more successful, albeit at significant cost. As part of its new brown to green approach, Bord na Móna has invested in wind energy. However, the installation of wind turbines in bogland is controversial as it can lead to further environmental degradation.

The key findings from this research are as follows. As its bogs became increasingly cutaway, Bord na Móna has been slowing down and transitioning simultaneously: a dialectic of unstable progress through time. The company once had a social remit to employ people in an otherwise underdeveloped region of Ireland: its midlands. This changed in the 1980s when the company found itself in financial crisis. New working relations have emerged in recent years. Seasonal employees were oftentimes students who sought work during summer holidays to fund their third level education and farmers who sought to supplement their income. In time this model changed, with workers left in a precarious position. It is now a growth-orientated company which aims to return a profit to the exchequer. Communities developed alongside the peat industry and as it declined so did local business. Moreover, there are no quick-fix solutions to job loss in the Irish midlands. Bord na Móna has paid for workers to be retrained and even offered new jobs to former employees who had previously been made redundant. However, these roles are lower pay and/or temporary. Transition efforts have failed to replace the employment that once existed in the bogs, power stations and briquette factories. Furthermore, a one-size-fits-all approach for utilising post-industrial bogland is not possible due to their variable geography.

A number of gaps in geographic literature have been identified during this study. The research contributes to just transition literature in new ways. First, it contributes a study of peat into a body of work dominated by coal. Second, it provides an account of just transition in Ireland, which has been understudied to date. Third, it contributes to human geography debates around people/nature interactions, arguing that the bogs of Ireland have been produced in a myriad of ways through labour. Fourth, it contributes empirical data concerning the role of the state to political ecology discussions around power, control and marginalisation.

CONTENTS

<i>Declaration</i>		iii
<i>Acknowledgements</i>		iv
<i>Summary</i>		vi
<i>Contents</i>		viii
<i>Abbreviations and Acronyms</i>		x
<i>List of Figures</i>		xii
<i>List of Tables</i>		xiii
<i>List of Maps</i>		xiv
<i>List of Plates</i>		xv
<i>Timeline of Events</i>		xvii
<i>List of Appendices</i>		xix
<i>Notes</i>		xx
PART I	CONTEXT	1
Chapter One	Introduction	2
Chapter Two	Literature Review	9
Chapter Three	Methodology	35
Chapter Four	Geographic Aspects of Irish Peatlands	51
PART II	FINDINGS	91
Chapter Five	Livelihoods and the Irish Peat Industry	92
Chapter Six	The Long Decline of Bord na Móna	112
Chapter Seven	The End of Industrial Peat Extraction	129
Chapter Eight	Raised Bogs, Contested Visions	143
Chapter Nine	Lessons in Transition	162
Chapter Ten	The Long Transition of Bord na Móna	190
Chapter Eleven	Landscapes in Transition	221
Chapter Twelve	Towards a Just Transition	245

PART III	SYNTHESIS	274
Chapter Thirteen	Discussion	275
Chapter Fourteen	Conclusion	291
PART IV	REFERENCES AND APPENDICES	294
	References	295
	Appendix	335

ABBREVIATIONS AND ACRONYMS

AWG	Autonomous work group
BnM	Bord na Móna
BOGFOR	Bog Forest (project)
Co.	County
CSO	Central Statistics Office
CTCCS	Cessation of Turf Cutting Compensation Scheme
EEU	Employee enterprise unit
EPA	Environmental Protection Agency
ESB	Electricity Supply Board
EU	European Union
EU ETS	European Union emissions trading system
GHG	Greenhouse gas
ha	Hectare
HQ	Headquarters
IPC	Integrated pollution control
IPCC	Irish Peatland Conservation Council
JT	Just transition
LBDP	Lough Boora Discovery Park
LBP	Lough Boora Parklands
LHDP	Lullymore Heritage and Discovery Park
m	Meter
MSWP	Mid-Shannon Wilderness Park
MR	Midlands Region (NUTS3)
Mt	Megaton (1 million tonnes)
NHA	Natural Heritage Area
NPWS	National Parks and Wildlife Service
NUTS	Nomenclature of terrestrial units for statistics
OECD	Organisation for Economic Co-operation and Development
PBR	Payment by Results
PCAS	Peatlands Climate Action Scheme

PFE	Peat-for-energy
PFH	Peat-for-horticulture
PPP	Polluter Pays Principle
PSO	Public Service Obligation
REFIT	Renewable Energy Feed-In Tariff
RFT	Revised Feedstock Terms
RTÉ	<i>Raidió Teilifís Éireann</i>
SIS	Sabrina Integrated Services
SAC	Special Area of Conservation
t	Tonne
TCCA	Turf-cutters and Contractors Association
TDB	Turf Development Board
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change

LIST OF FIGURES

2.1	Wild space continuum	15
2.2	A model for social nature	20
3.1	The analysis process	48
4.1	Acrotelm and catotelm	55
4.2	The formation of raised bogs	56
4.3	Key features of a raised bog	59
4.4	Moss peat	68
4.5	The state, the bogs and the people	70
6.1	Historical representation of Co. Offaly population trends	114
11.1	Social nature lifecycles of Irish peatlands	225

LIST OF TABLES

3.1	Formal participant details	44
3.2	Codes for analysis	48
4.1	Typologies of Irish peatlands	66
4.2	The key development stages of Bord na Móna	71
4.3	Bord na Móna briquette factories	73
4.4	First generation ESB turf-fired power stations	74
4.5	Second generation ESB peat-fired power stations	74
4.6	Third generation Bord na Móna and ESB peat-fired power stations	75
6.1	Bord na Móna employment through time	113
12.1	Bord na Móna retraining budgets	259

LIST OF MAPS

4.1	Irish homes heated with peat	62
4.2	The spatial arrangement of Bord na Móna	72
4.3	A raised bog landscape	82
4.4	Bogs Commissioners map of Clonsast bogs and their surrounds	86
4.5	Hammond's 1978 peatland map of Ireland	86
4.6	Derived Irish peat map V2	87
4.7	Irish peatlands and their uses	88
5.1	Kilcormac, Co. Offaly, in the bog landscape	107
8.1	Turf bank ownership at Girley Bog, Co. Meath	150
9.1	Clara Bog SAC in the Bog of Allen	163
9.2	Clara Bog SAC	168
10.1	Bord na Móna Boora group of bogs	194
10.2	Lough Boora Parklands	206
11.1	Bord na Móna Littleton group of bogs	226
12.1	Map of the Bog of Allen produced by the Bogs Commissioners (1809 – 1813)	247
12.2	A contemporary satellite image of the landscape depicted in Map 12.1	247
12.3	A map of Ireland's bogs	256

LIST OF PLATES

1.1	The Clara Bog SAC boardwalk	6
4.1	Central Plain, Co. Offaly	57
4.2	Central Plain, Co. Longford	57
4.3	Sheheree Bog SAC, Killarney, Co. Kerry	59
4.4	Extruded turf, Co. Longford	61
4.5	Round-leaved sundew	63
4.6	Turbary bog, Co. Longford	64
4.7	A post-industrial Bord na Móna bog, Co. Longford	65
4.8	A Bord na Móna rake at ESB Lough Ree, Co. Longford	69
5.1	St. Cormac's Park, Kilcormac, Co. Offaly	96
5.2	A tip-head, Co. Offaly	99
5.3	Gabriel and Hillary's shop	103
5.4	ESB Lough Ree power station, Lanesborough, Co. Longford	104
5.5	Kilcormac town	108
6.1	Bord na Móna Edenderry power station, Co. Offaly	118
7.1	Signage for Lough Boora Discovery Park	136
8.1	A turf-cutter's shed	144
9.1	Lough Roe	164
9.2	Plants of the cutover	166
9.3	Drain-blocking dam	167
9.4	A turf-cutter	177
9.5	Evidence of dumping	187
10.1	Farmland at Boora, Co. Offaly	195
10.2	A stand of willow on reclaimed cutaway, Boora, Co. Offaly	201
10.3	Lough Boora Discovery Park	205
10.4	Mute swans (<i>Cygnus olor</i>) at the Lough Boora Discovery Park	210
10.5	Sky Train	215
10.6	Financing the parklands	217
10.7	Cutaway bog	218
10.8	Evidence of fire hazard, Boora, Co. Offaly	219

11.1	Rehabilitated cutaway habitats, Boora, Co. Offaly	223
11.2	Rewetted cutaway bog at Corlea, Co. Longford	224
11.3	Bog pump	227
11.4	High and low fields	228
11.5	Materials underlying raised bog	229
11.6	Naturally regenerating cutaway at Bawnmore Bog	232
11.7	Revegetated cutaway, Bawnmore Bog	235
11.8	Bare headland at Bawnmore Bog	236
11.9	Rewetted cutaway	237
11.10	Features at Bawnmore	238
12.1	Environmental education	248
12.2	Industrial heritage	250
12.3	Lullymore Heritage and Discovery Park boardwalk	251
12.4	Derelict housing	252
12.5	The gateway to Lough Boora	253
12.6	Littleton briquette factory	257
12.7	Plastic waste to reusable nurdles	258
12.8	Inside the Lough Ree power station	260
12.9	Mid-Shannon Wilderness Park at Corlea, Co. Longford	268
13.1	Post-industrial bogland, Co. Longford	288
13.2	Revegetated cutaway bogland, Co. Offaly	288

TIMELINE OF EVENTS

1934	Establishment of Turf Development Board
1946	Establishment of Bord na Móna and the initiation of the first development programme
1952	Second development programme
1974/5	Third development programme begins
1983/4	Peak BnM employment (7,171)
1987	Eddie O'Connor appointed as BnM managing director
1989	Establishment of the autonomous work groups
1988	Closure of Portarlinton power station and Clonsast group of bogs
1992	First Irish wind farm opened by BnM at Oweninny, Co. Mayo
1993	Closure of Allenwood power station and Lullymore briquette factory, Co. Kildare; Opening of Lullymore Heritage and Discovery Park
1997	Habitats Directive Adopted in Ireland; Designation of Clara Bog as an SAC
1999/2000	Bord na Móna granted IPC licences
2000	Closure of Croghan briquette factory, Co. Offaly; Opening of Edenderry power station, Co. Offaly
2003	Closure of ESB Ferbane, ESB Rhode and ESB Shannonbridge power stations, in Co. Offaly Bord na Móna halts peat extraction in Co. Mayo
2004	Closure of ESB Lanesborough power station, Co. Longford; Opening of ESB Lough Ree power station, Co. Longford
2005	Closure of ESB Bellacorick power station, Co. Mayo; Opening of West Offaly power station, Co. Offaly
2011	Peatlands Council founded
2012	Peatlands Forum held and Quirke Report published
2015	Autonomous work groups end; BnM's <i>Sustainability 2030</i> plan launched; Public Service Obligation removed from Edenderry power station

- 2018** Closure of Littleton briquette factory and its associated bogs;
Further 430 workers offered redundancy at Bord na Móna
- 2019** High Court ruling by Justice Garret Simons that industrial
extraction on bogs above 30 ha requires planning permission
- 2020** Closure of ESB Lough Ree power station, Co. Longford, and ESB
West Offaly power station, Co. Offaly;
Bord na Móna bog rehabilitation scheme announced (PCAS)
- 2021** Bord na Móna announce cessation of peat extraction

LIST OF APPENDICES

1	The impact of Covid-19 on the present study	335
2	Participant information form	336
3	Participant informed consent form	338
4	Sample questionnaire	340

NOTES

All images used in this thesis were taken by the author unless otherwise stated. Satellite images were produced using Apple Maps and Google Maps.

The thesis is presented in four parts. Parts I through III are made up of chapters. These are in turn made up of numbered sections (e.g. 4.2), with some having subsections (e.g. 10.7.2).

References are in the Harvard Style. The approach mirrors that used in *Key Concepts in Geography*, edited by Clifford, N. J., Holloway, S. L., Rice, S. P. and Valentine, G. (2009) and published by Sage. Further guidelines drawn from the Freeman Library 'referencing' webpage, Geography Department, Trinity College Dublin.

PART I: CONTEXT

CHAPTER ONE: INTRODUCTION

1.1 POACHER TURNED GAMEKEEPER

On the 15th of January 2021, Bord na Móna's (2021) chief executive Tom Donnellan formally announced the end to the semi-state company's peat extraction activities. In a statement, Donnellan outlined Bord na Móna's (BnM) 'Brown to Green' strategic shift from 'traditional peat business' to a future as a 'climate solutions company'. This transformation he said would see BnM focus on renewable energy projects, recycling, and unspecified 'low carbon enterprises'. Donnellan added that this new approach would contribute towards the Irish government's objective of carbon neutrality by 2050.

However, BnM's plans to end peat production were not universally welcomed. Whilst the announcement had been anticipated, workers, communities and businesses dependent on the peat industry expressed concern at the pace of the closures. In 2015, it had been reported that BnM would cease peat production by 2030 (Murtagh, 2015). In its *Sustainability 2030* plan, BnM outlined its ambitions to be market leader in renewable energy in Ireland and home heating in both Ireland and the UK. This strategy differed from the eventual Brown to Green approach as it incorporated peat as part of the company's future through a commitment to continue its supply into the professional horticulture sector.

The closure of BnM's peat business has economic, social and environmental consequences. In response, trade union representatives have called for a 'just transition' for workers affected. Communities once dependent on the peat industry fear that there will be a downturn in local economic and social activity. This arose at a time where bogs deemed of high conservation value were being protected by the state, resulting in the exclusion of domestic turf-cutting, further exacerbating tensions between communities and decision-makers.

BnM's emerging environmental credentials are at odds with its commercial activities of the past. With raised bogs quickly disappearing in the 1980s, Cross (1990a) produced an inventory on behalf of the National Parks and Wildlife Service (NPWS) of sites worthy of protection. He (ibid: 85) identified All Saints bog in Co. Offaly and described it as follows:

The only known example of a raised bog in Ireland possessing an extensive, wet birch wood across the centre of the dome. It is a wet bog with well-developed hummocks, shallow pools and *Rhynchospora alba* flats and it is an important feeding and roosting site for Greenland White-fronted geese which frequent the adjacent callows (floodplain) of the Little Brosna River. Bord na Móna plan to develop the bog.

The final remark reveals a BnM concerned with economic development in spite of the ecological significance of the peatland in question. The need to protect bogs for wildlife habitat has been part of peat-related discourse for over 40 years, yet BnM's conservation efforts during this time have been limited. However, it was acting under a remit to maximise the socio-economic value of Ireland's peat resource. It is now mandated to support Ireland's greenhouse gas emissions reduction commitments through the sustainable use of its 80,000 ha landbank. However, the future of this space is uncertain. Moreover, the impact the closure of industrial bogs will have on workers and communities remains unknown. For human geographers, there is much to consider.

1.2 INTRODUCTION

This chapter introduces the thesis. It describes its aims and objectives and the research questions that emerge. These structure the project and inform how the data is collected. The title of the thesis is then briefly discussed. A model for what a 'sustainable bog' is described. An overview of the chapters in this thesis is then presented.

1.3 AIMS, OBJECTIVES AND QUESTIONS

This thesis sets out to critically examine the closure of the peat-for-energy business and identify the social, economic and environmental consequences that emerge thereafter. *Bord na Móna*, translated from Irish into English as 'The Turf Board', is a company majority-owned by the Irish state. It is the primary focus of this study given its central role in managing the country's peatland resource.

Aim 1: Present a critical account of the contemporary transition of the Irish peat-for-energy sector.

Objectives:

- Critically examine geographic and other literatures pertaining to human-nature interactions
- Collect oral testimony which accounts for the development and decline of the peat industry through time
- Evaluate the role of Irish state and its institutions in managing prior peat-for-energy transitions

Aim 2: Contribute to socio-economic and environmental debates concerned with energy transition and industrial landscape transformation.

Objectives:

- Produce empirical data that will inform the Irish government's ongoing just transition efforts
- Publish findings in peer-reviewed journals
- Present the research findings at national and international events

The aims and objectives lead to the following research questions, around which the thesis is structured:

1. Why has Bord na Móna ceased extracting peat from its bogs?
2. What are the socio-economic implications for peat workers and midland communities once industrial bogs close?
3. What will become of the post-industrial bogs? How have these landscapes been utilised historically?
4. How have peat-for-energy transitions been managed in the past? What lessons, if any, can be applied to contemporary just transition efforts?

The thesis initially engages with these questions by drawing on secondary literature sources. However, a gap is identified, namely, the lack of research surrounding the contemporary and historical transition of Irish peatlands, and so primary research has been gathered to fill this void. This is the basis for the thesis' original contribution to knowledge. Next, the title of the project is briefly addressed.

1.4 PROJECT TITLE

The title of this study is ‘Sustainable bogs: Challenges in transition’. This raises the question: what is a ‘sustainable bog’?

According to Lawhon and Murphy (2011: 354), sustainability is becoming a key focus in geography, linking subdisciplines such as economic geography and political ecology. Moreover, sustainability is now at the ‘heartbeat’ of Bord na Móna’s (2015) business. However, this term has arguably lost much of its meaning given its now widespread application.

Sustainability arose from the concept of ‘sustainable development’, a term associated with the United Nations’ *Our Common Future*, (Brundtland, 1987 Ch. 2: 1), where it is defined as: “Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.” Furthermore, it prioritises the needs of the world’s poorest people. Nevertheless, Agyeman (2005) critiqued this definition due to what he considered its lack of emphasis on equity and justice.

While in theory the notion of sustainability is well-meaning, geographers, according to Lawhon and Murphy (2011: 355), have criticised the sustainability concept for its ambiguity and its integration into the neoliberal political economy. Arguing for a more equitable, justice-focused environmentalism, Agyeman (2013) conceived of ‘just sustainabilities’, a model which aims to synthesise ecological and social concerns. This study advances the concept of a ‘sustainable bog’ as one where these landscapes are utilised in ways which balance environmental, economic and social needs. Bogs are not renewable on a human timescale and as such, extraction of peat is not sustainable. However, limited bog disturbance should not be precluded. Placing a boardwalk across a bog which enables both local people access and attracts visitors may impact on its ecological integrity. However, such endeavours may well ensure that the peatland is valued in new ways outside of extractive activities.



Plate 1.1 The Clara Bog SAC boardwalk Developments such as this may not be suitable for all bogs, but where they can be installed, boardwalks provide valuable community benefits including amenity

1.5 STUDY STRUCTURE

This thesis is arranged into four parts. The first discusses the secondary data and the research approach. It contains four chapters. The second part presents eight findings chapters. Each of these speak to the research questions outlined in this introduction. Data was collected through semi-structured interviews with informed stakeholders. Part three synthesises the literature and the findings before conclusions are drawn and policy recommendations made. The chapters are detailed below.

Following this introduction, Chapter Two engages with the literature used in this study. It covers debates concerning wilderness, nature, capitalism, labour and justice. It concludes that nature is social, produced through labour. When peat workers are removed from industrial bogs there are justice implications. Just transition then emerges as a lens which is applied throughout the rest of the thesis.

Chapter Three outlines the study's methodology. It argues that in order to understand the complex spatiotemporal transition of the bogs, a qualitative approach that employs semi-structured interviews should be adopted. 36 people took part in this study. Details pertaining to the ethical framework, interview process, transcription, analysis and coding are included. Weaknesses in the study are acknowledged, including the study's unbalanced gender representation and its arduous verification process.

Chapter Four describes the geography of Irish peatlands. A range of sources are drawn upon, including wetland ecology, human geography, carbon science, population statistics, government reports and environmental history. A typology of Irish peatlands is produced and the role of the state in managing these landscapes is identified. The chapter finds that peatlands are valued in a myriad of ways, but this is subject to change.

Part II of this thesis presents the research findings. Chapter Five assesses the relations that existed between peat workers, small business and BnM. It concludes that the peat sector has been declining through time. Further evidence is outlined in Chapter Six, which focuses on BnM working arrangements through time. It identifies precarious working arrangements in the years up to the final closure of the peat sector. Chapter Seven investigates why peat production suddenly ended. It concludes that the sector was closed following a High Court ruling by Justice Garrett Simons. In this, extraction of peat from bogs over 30 ha in size without planning permission was found to be in breach of EU environmental directives.

Attention then moves to another peat-for-energy transition: that of the turbarry bogs to Special Areas of Conservation. This proved highly contentious. Chapter Eight discusses the practice of turf-cutting for domestic purposes and introduces the contested visions that surround it. Chapter Nine presents an account of the transition from the initial notice to turf-cutters to cease and desist, through the 'derogation', negotiations, a judge-led truth and reconciliation-style process, towards the semblance of a settlement. This study argues that lessons must be learned from this process when considering future peatland transitions.

Chapter Ten examines cutaway bog utilisation through time. It finds that there is no single use that can be applied to all bogs, for each is unique. This poses significant challenges to land-use planners. Chapter Eleven considers BnM's bogland rehabilitation efforts, notably its emerging PCAS strategy to rehabilitate 33,000 ha of bogs in an 'enhanced' fashion. The final findings

chapter then discusses just transition efforts by communities, BnM, the ESB and third parties. The concept of creating wilderness is examined in detail.

Part three brings the findings and theory together in an effort to answer the research questions.

1.6 CONCLUSION

This chapter opened by contextualising the ‘problem’: the closure of the Irish peat industry, which this thesis speaks to. The aims and the objectives of the study were then rationalised before the research questions that emerge were outlined. Each of the chapters in this study were then briefly discussed. The literature used in this thesis is reviewed in the next chapter.

CHAPTER TWO: LITERATURE REVIEW

2.1 INTRODUCTION

Throughout history, people have altered landscapes for subsistence through their labour. Increasingly, ecosystems are enrolled into global capitalism which often leads to their degradation. From this, nature has been produced anew.

The following literature review engages with debates on how nature and culture have become indistinguishable. The raised bogs characteristic of the Irish Central Plain formed through natural processes of temperature change, precipitation and plant succession. In time, people worked these landscapes in various ways. They have been drained, reclaimed, cutover, cutaway and built upon. Yet there is a tension at the heart of such human/nature interactions. There are no pristine raised bogs remaining in Ireland. However, the utilisation of these landscapes provided gainful employment and social cohesion in rural Ireland.

This chapter finds that human/nature relations are inherently political. Value systems are subject to change. This can lead to justice claims as new human/environment arrangements are implemented in response.

2.2 THE NATURE OF NATURE

Raymond Williams (1983: 219) famously wrote that “nature is perhaps the most complex word in the [English] language.” This, he concluded, is due to the “fundamental importance of the processes to which it refers” (1983: 224). Castree (2001a) described the term as ‘promiscuous’ given its use in a multitude of ways by different groups. Soper (1995: 2) added that the concept of nature “carries an immensely complex and contradictory symbolic load; it is the subject of very contrary ideologies; and it has been represented in an enormous variety of different ways.” Perceptions of nature have been shaped both temporally and spatially. In a metaphor in which he referenced trees’ build-up of rings, Smith (2010b: 11) remarked “the social concept of nature has accumulated innumerable layers of meaning in the course of history.” It is therefore unstable, for it is a “contested term that means different things to different people in different places (Ginn and Demeritt, 2009: 300).”

Environmental thought has traditionally encouraged people to see nature outside of the cultural realm (White, 1996). Wildlife documentaries depicts nature existing in the forests, seas, mountains, skies, bogs and deserts in a state external to ordered civilization. Marx (2008 [1867]: 116) wrote “the soil... in the virgin state in which it supplies man (sic) with necessaries or the means of subsistence ready to hand, exists independently of him.” For Leopold (1995), western economies have waged war *on* nature. It would appear from such narratives that nature is that which humans have *not* produced (White, 1996). It is a space for people to visit, but not stay. Nature *within* humanity only exists in the deep recesses of our personality traits. This idea of some semblance of ‘human nature’ implies society might well be as natural as the untouched, primeval world (Smith, 2010b). Humans after all, are “natural constructs”, with “the body, the brain and the environment [having] evolved together over millions of years (Gerber, 1997: 3).” Moreover, people are dependent on the natural world for their very survival in what Loftus (2012: 23) described as a ‘continuous interchange’, leaving their marks on the earth as they go.

In his analysis of debates around the apparent social construction of nature, Demeritt (2002) differentiates between its physical alteration by people and the development of concepts and discourses to describe and value it. An example of the former would be cutting of drains in a raised bog in order to enable the extraction of turf. An example of the latter would be the idea of bogs as wastelands. Discourses surrounding what is and is not natural in the human sense are not fixed and often arbitrary. In their discussion on food production, Ginn and Demeritt (2009) found that products made through ‘traditional’ means are routinely marketed as ‘natural’, whereas those manufactured with complex industrial processes like pasteurisation, concentration and sterilisation are deemed ‘artificial’. Given that both require human intervention, the inconsistent rules of what it means to be ‘natural’ or otherwise are clear. The concept of nature, therefore, is bound up in contradiction (Smith, 2010b).

Williams (1983) outlined three ‘natures’ in his analysis. The first relates to essence or ‘character’; the second is ‘force’; and third, “the material world itself, taken as including or not including human beings (ibid: 219).” Ginn and Demeritt (2009: 301) developed Williams’ model with their own interpretation of his three natures. The first is extrinsic nature. This is the environment, and the traditional view of nature. The second is intrinsic nature. These are internal factors of a given item or phenomenon’s inherent characteristics. Third is universal nature, including ‘Mother Nature’, and natural laws such as gravity. Castree (2014: 10) adds

a fourth: Super-ordinate nature, the life force which ‘animates’ living beings as they interact in their respective environment.

The next section examines the most natural of all natures: wilderness, a space it would seem no trace of human civilisation can be found.

2.3 THE NATURE OF WILDERNESS

Debates around wilderness concern both the ontological, the extent of physical alteration of nature by people, and the epistemological, the understanding and conceptualisation of these spaces (Proctor, 1998). This study places an emphasis on the former.

The bogs of Ireland have long been described as *wild places* (e.g. Praeger, 2014 [1937]; Bellamy, 1986). Both Clarke (2010) and Gladwin (2016) explored how Irish bogs had historically been considered ‘wastes’: a synonym for ‘wilderness’ (Cronon, 1996). Wilderness, or ‘first nature’ according to Smith (2010b), are spaces framed as “self-willed lands” (Rossberg, 2018), hosting “nature in its fullest” (Proctor, 1998: 355). Conversely, two human-altered Irish peat landscapes are conceived of and promoted as wilderness: Wild Nephin in Co. Mayo and the Mid-Shannon Wilderness Park in Co. Longford (discussed in Chapter Twelve).

For many environmentalists, such conceptualisations of wilderness are ‘unproblematic’ (Proctor, 1998: 355). The deliberate demarcation of natural spaces separate from civilisation, particularly in the context of an ever-growing world population and government-declared environmental emergencies, is often used by conservationists as a means to protect them. For many geographers preserving delicate habitat is vital in addressing ecosystem breakdown. However, some conserved spaces have become contested. The idea of a primeval, untouched nature is routinely critiqued by political ecologists. Protection of so-called wilderness areas have seen local communities displaced and excluded from their historical homelands (Neumann, 1998). On the other hand, the Wild Europe Initiative (2013) has argued that plans to protect wilderness have been slow to form due to the lack of a common definition of the term. Furthermore, perspectives which do exist differ spatially. The United States Wilderness Act of 1964 (Section 2C) defines it as follows: “A wilderness, in contrast to those areas where man (sic) and his own works dominate the landscape, is hereby recognised as an area where the earth and its community of life are untrammelled by man, where man himself is a visitor

who does not remain.” The Act adds that wilderness is of “primeval character and influence”, that is “without human habitation”, and is subjected primarily to the “forces of nature.” In this context therefore wilderness exists outside and away from people: a traditional or ‘classical’ model of wilderness. Such visions have been heavily critiqued by geographers.

The ontological division of nature and society, for Robbins (2012) is an artifice of colonialism. Ginn and Demeritt agreed, noting nature’s roots in a “contested colonial heritage (2009: 303).” Yet Cronon (1996), amongst the strongest critics of the term, does not deny the ‘otherness’ of what people commonly understand to be wilderness. Neither does he refute the emotional response to a profound ‘natural’ spectacle. A murmuration of starlings over a lake or the vista from atop the Grand Canyon illicit an undeniable emotion in those who bear witness. However, Cronon nevertheless contends that wilderness remains a social construction, which “hides its unnaturalness behind a mask that is all the more beguiling because it seems so natural” (1996: 69).

Cronon (1996) theorised how landscapes have been understood differently through time. Visions of wilderness in the eighteenth century referred to these spaces in a negative light; as “deserted”, “savage”, “desolate”, “barren”, and as “wastes” (ibid: 70). By the late nineteenth century however, wilderness in the United States was conceived of in nostalgic ways: as ‘sublime’ and ‘frontier’. Witnessing sublime wilderness with its mountains and waterfalls was a religious experience and therefore these places were deemed worthy of protection. Notions of wilderness as ‘frontier’ coupled with the sublime imbued it with “moral values and cultural symbols (ibid: 72).” The frontier was a celebration of an American national identity that championed the individual. Here, one could be free to live a purer existence, and men could be *real* men – further reason for their protection as they represented the core of what it meant to be an American.

For Robbins (2012: 179), wilderness is instead an “imposed ideal”. Nature is perceived discursively, for there is no objective way to know nature without our visions being coloured by narratives that serve powerful interests in such ways that eventually become taken for granted (Castree, 2001a). Colonial rule over less developed societies was enabled through discourses of primitivism and savagery constructed around these spaces and those who lived in them (Ginn and Demeritt, 2009). For Cronon (1996), the visions of a North American wilderness is particularly problematic as it enabled colonisers to displace Indian cultures. Most

galling, the wilderness itself may have been shaped by the people that outside authorities sought to remove (Robbins, 2012). In his earlier work on New England, Cronon (2003 [1983]) revealed that indigenous people had altered their environment through use of fire, which facilitated agriculture and easier hunting. Colonialism would further transform the landscape, new settlers did not find a pristine wilderness upon their arrival. Furthermore, Lewis and Maslin (2018) found that indigenous people in South America had been similarly altered the landscape prior to Spanish colonisation.

With indigenous people excluded from the North American wilderness, these landscapes could safely be reconceptualised as “uninhabited” and “virgin” (Cronon, 1996: 79). Frontier fantasies could now be played out by urban weekend visitors. In sub-Saharan Africa, wilderness was carefully preserved in national parks and utilised for tourism (Neumann, 1998). Such practices demonstrate the socially constructed reality of wilderness, and the very real implications for those no longer welcome.

2.4 RETHINKING WILDERNESS

The wilderness concept has “long entailed an antagonistic dualism between nature and civilisation (Proctor, 1998: 356).” Opposite to wilderness lies culture: worked land, society, domesticated animals and the urban realm. Conventional thought imagines there is no nature here. In civilised space rational people seemingly rise above a brute nature occupied by animals with their base instincts (Ginn and Demeritt, 2009). Yet geographers have argued that these ordered, human made places would not exist without nature (Robbins, 2012). This is demonstrated in *Nature’s Metropolis*, where Cronon (1992) argued that the city of Chicago developed as a result of the movement of commodities through its extended rail network and port. These goods were derived from the forests and prairies in the city’s hinterlands – the ‘Great West’. Moreover, instead of being built from within, Chicago was constructed of natural materials from the outside (Robbins 2012). It is populated by people, wild animals and plants, and remains dependent on the utilisation of resources such as oil, water and wood derived from the non-human realm. Chicago, like other urban spaces, is both social and natural.

The critique of wilderness as a real world reality is supported with more recent conceptualisations of culture/nature interactions. The Anthropocene model argues that humanity has touched all aspects of the planet (for a detailed account see Lewis and Maslin,

2018). It holds that humans are now a dominant force capable of profound alteration of planetary systems. Changes in Earth's temperature resulting from the release of 1.5 trillion tonnes of carbon dioxide into its atmosphere has seen the influence of human activities encroach even into the furthest reaches of the Antarctic wilderness (Bonneuil and Fressoz, 2017). Humanity has made permanent its mark on the planet. Nature, in its 'purest' form, that is, nature outside of the reach of human labour, may no longer exist (White, 1996). In Ireland, no raised bogs remain fully intact, for all bear the marks of human interaction to various degrees.

Cronon's arguments against the idea of wilderness have nevertheless drawn criticism. He was been accused of "ignorance of biology" and of "carelessness about the consequences of his critique of wilderness (Foreman, 1996: i, 4: in Proctor, 1998: 356). Hays (1996) recounted working in eastern United States during the 1970s demarcating wilderness areas. He argued that wilderness does not need to be 'pristine', with no human history; instead it simply needs to possess wilderness characteristics in the here and now. Furthermore, Hays (1996: 30) accused Cronon of not engaging with wilderness practitioners, but instead "a few writers who have much to say about wilderness philosophy." Perhaps the idea of wilderness has a future, albeit one that welcomes people rather than excludes them.

Wilderness has recently gained traction in Europe. However, this is a less 'pure' vision than that seen in the 1964 United States Wilderness Act. Following a European Parliament resolution in February 2009 calling for enhanced protection for these spaces, a conference of stakeholders was held in Prague later that year to raise awareness of wilderness locations, develop a strategy for their protection and clearly define what the term means (Coleman and Aykroyd, 2009). The conference gave support to the Wild Europe Initiative (2013: 2) and began a consultation process, culminating in the now widely used definition¹: "A wilderness is an area governed by natural processes. It is composed of native habitats and species, and large enough for the effective ecological functioning of natural processes. It is unmodified or only slightly modified and without intrusive or extractive human activity, settlements, infrastructure or visual disturbance." Cronon (1996) criticised the notion that large spaces are any more important than those on a smaller scale. However, for large species to thrive and reproduce in a healthy, functioning ecosystem, scale is important.

Efforts are ongoing to designate and protect such landscapes. The European Wilderness Society (2019) oversees the designation of wilderness on the continent. They present a model where a suitable site is selected², with wilderness aspects created in a given space³. Rather than finding wilderness, people are *producing* it. For Castree (2001a: 5), nature is social “in different ways, at different levels.” Wild Europe Initiative (2013) proposed the concept of ‘wild areas’, which give tacit acknowledgement to a *social* form of nature. In contrast to traditional visions of wilderness however, wild areas tend to be smaller and subject to modification by people. If possible, current land uses in wild areas are suspended or scaled back and restoration efforts entered into. This could nevertheless prove contentious if otherwise innocuous human activities were curtailed and people expelled (see Robbins, 2012, Ch. 9).

The Wild Europe Initiative (2013) posits that the ‘wild’ characteristics of a given space can be measured along a continuum. At one end is marginal land that is either farmed or afforested, while at the other is wilderness. Its goal is to transition a suitable parcel of altered land along the continuum until it is at its wildest possible state. This process can occur as the result of human actions restoring and/or rewilding the space, or by allowing natural processes to assume control. In effect, the wilderness is produced by the actions or inaction of people. The idea of a human-produced wilderness is an oxymoron when considered in the classical sense, yet it also provides for a more fitting approach in the context of the Anthropocene.



Figure 2.1 Wild space continuum Wild Europe Initiative (2013) argue that renatured spaces can be placed along a continuum.

An alternative model of untouched wilderness through to cultural space was described by Kowarik (2017). First nature he argued is primeval, untouched and unaltered – in other words, classical wilderness. Second nature for Kowarik is the countryside – cultivated fields and meadows – a human produced landscape that retains a sense of the wild about itself. This is

slightly different to Hegel's second nature which is simply the peopled realm: society, the economy and the legal system (Schmidt, 2014). First nature is transformed into the second through human labour (Ginn and Demeritt, 2009). Kowarik's third nature is parklands and gardens, the manicured spaces produced by people to mimic otherwise natural ecosystems. Finally, his fourth nature sees heavily degraded landscapes 'renatured'. The study of such spaces, so-called 'ruderal ecologies', offer ways to reassess otherwise undervalued landscapes. The cutaway bogs left by BnM fit into this category.

The reconceptualisation of nature presented in this section remain problematic. By positioning wilderness and civilised spaces at opposing ends, Cronon (1996) argued that our collective ability to imagine a more sustainable way to live *in* nature is eroded; if nature exists in a far-flung wilderness, even if it is one that is produced by people, then it might very well be permissible to degrade those spaces that are closer to home. To fetishize wilderness as superior to other parts of the environment leads people to undervalue that nature which exists all around.

2.5 NATURE IN GEOGRAPHY

In the next section, the conceptualisation of nature in geography is discussed. The importance of capitalism is identified before the social nature through labour is critically examined.

2.5.1 The development of nature in geography

In geography, nature-society relations have historically been conceived of in various ways (for an account see Zimmerer, 2010). In the late-nineteenth and early-twentieth centuries, environmental determinism asserted that the physical geographic characteristics of a given location either enabled or curtailed social development and economic progress (Cresswell, 2013). Castree (2005) noted its use in supporting eugenics theory which argued that humanity could be 'improved' through selected reproduction. This form of cultural Darwinism was for Castree (2005: 55) "racist, ethnically elitist and socially exclusionary." Deterministic notions are now widely rejected.

Cresswell (2013) traced the development of geography through time. In the 1960s, quantitative spatial science, an approach in which geographers attempted to develop 'laws' to describe the physical world, emerged. In the 1970s, the human experience began to be placed at the centre of geographic thought by Yi-Fu Tuan. However, neither spatial science nor humanistic

geography said much about injustices such as imperialism, poverty, racism or oppression (Castree, 2005: 80). David Harvey led a Marxist approach aiming to address geography's shortcomings. However, this further weakened nature's place within the subject (Castree, 2005). This was rectified with Smith's (2010b [1984]) engagement with nature in *Uneven Development*, where he argued that humans had not simply interacted or interfered with nature, but instead had "*produced* it anew (Castree, 2001b: 191, emphasis in-text)". In Smith's (2010b: 50) production of nature thesis, "space and society are fused together." However, the notion that humans can *produce* nature seems counterintuitive. For those who believe in a 'natural world', the idea that nature is somehow produced is egregious (Ekers and Loftus, 2012).

Swyngedouw (2003) situates the development of the Spanish 'waterscape' in the 20th century in the context of Smith's (2010b) production of nature thesis. All of Spain's river basins, just like Ireland's raised bogs, have been altered by people (Swyngedouw, 2003). Castree (2001b) illustrates the production of nature thesis with reference to the selective breeding of crop seeds in twentieth century United States. Initially, the state oversaw the development of seeds and distributed them for free to farmers as a public good. This process was soon privatised and profit was prioritised. Sterile seeds that could not be replicated at farm-level were developed by corporations. Farmers became dependent on producers in order to cultivate their annual crops. The production of nature had unequal outcomes as Smith (2010b: 50) argued: "The differentiated results of [the] production of nature are the material symptoms of uneven development." Castree (2001b) argued that due to capitalism's profit motive, it is not possible for it to remake nature in environmentally or socially beneficial ways.

There are other ways of understanding nature in geography outside of Smith's production of nature thesis. Castree (2001a) identified two ways in which nature is understood in contemporary geography. The first is the 'people and environment' modality (Castree 2001a: 2), or, the 'technographic' approach. Smith (2010b: 11) himself described a similar dualistic vision, where external nature exists in a 'pristine', 'autonomous' state outside of society (i.e. classical wilderness) which in time undergoes cultural encroachment. This technocratic vision, for Castree, is rooted in the divide between human and physical environment studies. He argued that it seeks to 'manage', 'control' and 'dominate' nature (Castree, 2001a: 5), and is limited in scope as it largely ignores the forces that lead to environmental degradation (e.g. capitalism, politics). His second vision is 'ecocentric'. In this, Castree (2001a: 5) finds a radical approach,

a call to arms for people to ‘save’ the environment, and for society to ‘return to nature’. Again, this is dualistic, for it places people *outside* nature.

Instead, Castree (2001a) offers an alternative vision, where nature is inherently cultural. This *social nature* approach contends that the seemingly ‘natural’ world has been physically altered to such an extent by societies to suite their own needs that both domains have become inseparable.

2.5.2 Capital in nature

Sitting in his office, White (1996) contemplated his place in the world. A nearby hydroelectric dam (social) produces electricity (natural) that powers his computer (social). The dam was built by people (social) with quarried materials (natural). The water it holds arrives through seasonal fluxes (natural). The far-way mountains (natural) its rolls off of are visible through White’s window. The illusion of separation is created from modern spatial arrangement: White is physically separate from these socio-natural processes. He is not *in* nature as conventionally understood. However, his office is a form of social nature, for it is a cultural space connected to the so-called natural world.

The alteration of nature by society is arrived at through the capitalist mode of production. Moore (2015: 3) described capitalism as a ‘world-ecology’, which blends “accumulation of capital, the pursuit of power and the co-production of nature in dialectical unity.” For Smith (2010b), capitalism ‘consumes’ nature; new ideologies of what nature *is* emerge from this process. Having engaged with the concept of the Anthropocene, Moore (2016) argued instead for the *capitalocene*. In this, capitalism is recognised as a means to ‘organise’ nature (ibid: 6). According to Altvater (2016), it began when the fossil fuels were first used to power the industrial capitalist system. Yet he argued it is not simply a material system, but one of ideology.

The aim of capitalist is to make a profit (Castree et al., 2004), as opposed to production for use, or subsistence (Ekers and Prudham, 2017). This “surplus value... originates with labourers, whose work is exploited in the form of surplus labour time over and above that for which they are paid (Castree, 2001b: 193).” However, the production process cannot take place without human actors at various scales within the organisation (Yeung, 2002). The capitalist (part of the bourgeois class) oversees the production of commodities by labour power he or she has

purchased (Marx, 2008 [1867]). The resulting product (or indeed service) laboured on with the capitalist's means of production is not owned by the worker, but instead the capitalist. For the worker (the proletariat), efforts must be rewarded to the point that an adequate lifestyle can be maintained. For the endeavour to be worthwhile for the capitalist, products must be useful, desirable, and saleable for a higher price than the total cost of inputs.

The capitalist system is crisis prone as Castree et al. (2004) explained. First, the imperative for continual growth, competition in the marketplace, and ever more innovation leads to ebbs and flows of business development and decline over time. Second, competition amongst firms drives down wages, which inhibits the ability of citizens to consume commodities. Furthermore, the relations between workers and their employers are oftentimes characterised by 'social struggle' (Mitchell, 2001: 103). Winkler (2020) argued that capitalism leads inequality, such as poverty, while contributing for significant volumes of greenhouse gas emissions into the atmosphere. Increasingly limitations are being placed on capitalism as it exceeds "planetary boundaries" (Dryzek, 2013: 34). Environmental threats such as climate change, biodiversity loss and pollution threaten capitalism, and therefore the economy's ability to continually expand.

Debates emerged in the 1980s as to the extent of worker agency within the seemingly rigid capitalist system (Coe and Jordhus-Lier, 2010), while more recently the precarious nature of human labour has fallen under the spotlight (Strauss, 2018, 2020a, 2020b). While employees are exploited in the capitalist mode of production for the benefit of the capitalist, to not work is itself a 'disease' (Leopold, 1995: 81). Moreover, it is the labour of employees that produces *social nature*.

Marx (2008) theorised the labour process. He identified three core elements: the work, the tools used in that work, and the subject which is worked upon. Nature provides the raw materials and the tools imperative to the labour process. These 'means of production' are owned by the capitalist but used by the employee. Marx argued that nature was 'produced' by society through labour (Ginn and Demeritt, 2009). Marx (2008: 115) explained:

Labour is, in the first place, a process in which both man (sic) and Nature participate, and in which man of his own accord starts, regulates and controls the material re-actions between himself and Nature. He opposes himself to Nature as one of her own forces, setting in motion

arms and legs, head and hands, the natural forces of his body, in order to appropriate Nature's productions in a form adapted to his own wants.

Work in nature is often vilified by those who seek to protect it (White, 1996). Bell (2020) acknowledged that environmentalists often come into conflict with workers. This is nevertheless reasonable in the context of raised bogs given their slow accumulation, their scarcity and their ability to sequester carbon in the midst of climate breakdown. However, ridicule of workers themselves is misplaced. White argued that no one chastens people like him for benefitting from the fruits of their 'destructive' labour. Environmentalists, he concluded, have to make peace with work.

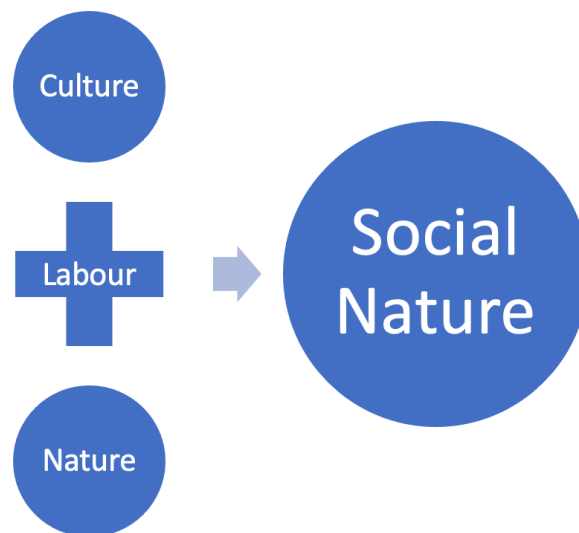


Fig. 2.2 A model for social nature Nature and culture are synthesised through the labour process.

2.5.3 The politics of labour

If nature is social, then it is also political (Castree, 2001a). Contested visions surrounding human/environment interactions can arise. Leopold (1995: 81) illustrated the tensions and contradictions that can emerge from social/nature labour interactions when he recounted the words of a chemicals operator in Bayonne, New Jersey:

Look. My family have lived around this plant for three generations. Of course I care about what it does to the environment. Maybe if I knew about these problems 30 years ago I wouldn't have

gone into this kind of work but I can't change that now. I've a family to support. My boy is about to go to college. If I lose this job, all I've worked for may be ruined. You can't expect me to give that up.

In another anecdote, a man ill as a result of exposure at his workplace tells his son that he would take his job all over again because it enabled his children to go to college (Leopold, 1995). Work is a necessity for human existence and essential for socio-economic progress.

White (1996) found that environmentalists see human work in nature in two ways. The first, and the one he considers most prevalent, is to consider labour in nature as a means to despoil it. Those who seek to protect the environment view those who work the earth in a negative light. White understood labour differently, and claimed that working in nature is to 'know it'. This knowledge is gained from the elemental experience, the physical toil over distance and the interaction with material objects as well as other lifeforms: "Working – how one works, how one wields a spade, how one handles a horse – imparts a bodily knowledge and a social knowledge (ibid: 179)." Yet this means of knowing nature does not preclude its degradation.

The second vision identified by White (1996) values subsistence activities such as traditional farming methods; for this way of working the land will surely impart a knowledge of nature that will ensure its protection. For some environmentalists he said, it is not labour itself which degrades the landscape, but the use of modern machinery. This dualism depicts manual labour as "relatively benign and even instructive," while mechanisation was "modern and destructive" (White, 1996: 178). Modern work can be viewed as the "enemy of nature" (ibid: 180) and modern workers conceived as "dangerous monsters" (ibid: 178). Somewhat surprisingly, White himself was critical of this argument that peasant labour was always innocuous. He expressed his opposition to both romanticising manual forms of labour and denigrating mechanised work. This is in contrast with Robbins' (2012) position that subsistence lifestyles tend to be sustainable, only becoming problematic when integrated into the world economy. Nevertheless, White's perspective has merit in the context of domestic turf extraction in Ireland, which is not sustainable on a human timescale given the slow accumulation of peat at just 1cm per decade.

Conflict over human labour is not limited to environmentalists vs. workers, but can also materialise between workers and the government. During the mid-twentieth century the State

of California imported, housed and organised foreign labour in the private agriculture sector, in what was known as the ‘Bracero’ programme (Mitchell, 2013). In this, Mexican labour was imported to satisfy supposed worker shortages. Bracero workers were to enjoy terms as good, if not better, than their American counterparts. However, the eventual reality would be much different, with clear injustices. Mitchell (2013: 225) accused growers that employed Bracero labour of “cheating and stealing”, with the state guilty of “collusion”. He concluded that the program was “deeply corrupt from beginning to end (ibid).” Workers lacked the ability to move from one job to the next and did not have the right to renegotiate their terms of employment. They were, in effect, indentured. Furthermore, the oversupply of imported labour drove down wages, benefitting the capitalists, thus enabling maximum returns from the cultural landscape. In contrast, Irish peat industry workers were employed in and housed by the semi-state company Bord na Móna (BnM). Further jobs were created in semi-state utility company Electricity Supply Board (ESB). At the heart of this system lay a social remit to address underdevelopment in the Irish midlands. Wages were favourable and employees offered a level of job security. However, Ireland’s exposure to the international energy market would eventually have ramifications for peat workers. BnM expanded in its Third Development Programme in response to the Oil Crises of the 1970s, but in time the plummeting costs of alternative, internationally-sourced fossil fuels would mean that peat was uncompetitive (Clarke, 2010). This had justice implications for the peat workers implicated with thousands made redundant by the early-1990s.

2.6 SPATIAL (IN)JUSTICE

In geography, the concept of justice is employed in various contexts including migration, gentrification, environmental hazards and globalisation (Israel and Frenkel, 2018: 647). While measurable in a physical sense through distance and direction, space is also *experienced* by people in different ways. For Massey (2005), it is political; for instance the movement of capital across a globalised world is rendered easier than the equivalent movement of labour. Spatial arrangements therefore, are often socially unjust.

According to Robbins (2012), the transformation or development of a given space has benefits, drawbacks and consequences for people and wildlife, with these experienced unevenly. Conflict over resources can occur at different scales, from the local to the global (Huber, 2019). Environmental ‘goods’ are oftentimes distributed to the higher classes and those in privileged

positions, while environmental ‘bads’ are often experienced by lower classes. Communities which tend to be negatively impacted are often already marginalised politically and economically, and therefore have limited capacity to resist. Yet this is not always the case.

Soja (2010) recounted a landmark event in spatial justice. In October 1996, the case of Labour/Community Strategy Centre et al. v. Los Angeles County Metropolitan Transit Authority was heard. This litigation arose amidst tensions over decision-making that favoured wealthy communities’ transport needs over those of the marginalised poor. The court ruled that authorities would have to improve bus transport favoured by the latter. This decision went against the prevailing transport policy in the US at the time which prioritised the building of roads, which proved advantageous for those with the means to own a car and who lived in suburban areas, much to the detriment of public transport needs of the inner city-dwelling working poor.

2.6.1 Environmental and climate justice

Incidences of spatial injustice often have racial and environmental dimensions. People of colour and those experiencing poverty are most at risk from hazards (Bullard, 2021). The study of this phenomenon is called environmental justice. Walker (2012: 10) said it is made up of three aspects: ‘distributive justice’ is concerned with how environmental goods or hazards are shared out amongst stakeholders; ‘procedural justice’ pertains to decision-making, influence and power, whilst ‘justice as recognition’ asks whose perspectives are given due consideration and whose are marginalised. But this does not address the root question posed by Bullard (2005a: 2): “Why do some communities get dumped on while others don’t?”

The southern states of the US, home to the highest proportion of African Americans in the country, are also historically its most contaminated (Simpson, 2002). Bullard (2005a: 2) outlined an assumption by non-white communities: “We don’t have the complexion for protection.” This perspective is rooted in a form of environmental racism. There is evidence to support such claims. In 1982, a decision was made to locate a toxic waste landfill adjacent to a black community in Warren County, North Carolina (Murdock, 2021). This arose shortly after conflict over the development of housing on a toxic waste dump at Love Canal, New York (Dryzek, 2013).

For Bullard, (2005a) environmental injustices are human rights issues, with health implications for those adversely affected. Simpson (2002) outlined risks to local people in a case study of chemical dumping at the Defense Distribution Depot of Memphis, Tennessee, in the mid-twentieth century. The community surrounding the site was almost entirely black. This “community in decline” according to Simpson (2002: 85) consisted primarily of single parent families. Those with the highest education attainment were retired. Simpson concluded that protests by community activist Doris Bradshaw were rejected not only due to her race, gender and class, but also out of fear of litigation and possible curtailment of economic development. It is this unfairness which characterises studies into environmental (in)justice. However, the approach is not without criticism. For Dryzek (2013: 214), it “is perhaps only weakly ecological.” He adds that within the movement “there is little appreciation of the role played by complex ecosystems in sustaining life on Earth.”

In the modern globalised economy, powerful actors can move environmental degradation with relative ease. The spatial displacement of ecological hazards has led to the emergence of new discourses. Coolsaet (2021) noted the cry for ‘Climate Justice’ from the Fridays for Future youth-led campaign group. This traces connections between social inequality and environmental degradation wrought by climate change. Those living in the Global South, who have contributed least, will be impacted disproportionately by disrupted weather patterns. For Dryzek (2013), climate justice is environmental justice globalised. Moreover, younger cohorts in the Global North will be burdened in the future by decisions and actions made by those who came before them. This spatial and intergenerational context has both ethical and political implications (Edwards, 2021). Furthermore, groups of people may be subjected to more than one form of injustice. When Leopold stated that “economic justice and environmental justice must go hand in hand (1995: 84)” he identified the interconnected nature of differing forms of injustice.

2.6.2 Energy injustice

Mitchell (2011: 8) described industrialised countries as ‘oil states’ (they could also increasingly be thought of as ‘gas states’). Ireland, particularly during the mid-twentieth century into the mid-1980s, could have been considered a ‘peat state’, so strong was its dependence on this fossil fuel. Bridge et al. (2018: 9) described how “energy systems and social structures shape and influence each other” in a two-way process they called ‘co-constitution’. Mitchell (2011: 8) said, “Without the energy [countries] derive from oil their current forms of political and

economic life would not exist.” This was true of midlands Ireland during the height of the peat industry where the production and utilisation of this fossil fuel enabled modern forms of existence.

Energy justice is an emerging field of study which critically examines equity and fairness in the context of energy systems. It has similarities with environmental justice scholarship. Bridge et al. (2018) remarked that, “The positive and negative consequences of harnessing energy are unevenly distributed and do not affect everyone equally. For example, pollution and other risks arising from energy production and consumption constrain the life chances of many, but often have much less impact on those who benefit most from access to energy.”

Fossil fuel systems are faced with twin threats: accessible supplies are being exhausted and their use is contributing to environmental breakdown (Mitchell, 2011). To meet the challenge of climate change, a transition away from unsustainable energy systems (e.g. oil, gas, coal and peat) must be “large-scale, radical and disruptive (Healy and Barry, 2017: 453).” The pressing need to act in order to arrest climate breakdown raises questions about who should respond and in what proportion (Caney, 2005). Politicians have been supportive of actions to ameliorate environmental degradation, yet policy enactment and implementation has been slow to reflect this (Healy and Barry, 2017). The Polluter Pays Principle (PPP) is a notable mechanism adopted by members of the Organisation for Economic Co-operation and Development (OECD, 2021 [1972]). It mandates that the costs of environmental degradation are borne by those responsible. The PPP became central to the United Nations Declaration on Environment and Development (1992, otherwise known as the Rio Declaration). Principle 16 stated: “National authorities should endeavour to promote the internalization of environmental costs and the use of economic instruments, taking into account the approach that the polluter should, in principle, bear the cost of pollution, with due regard to the public interest and without distorting international trade and investment.”

The implementation of PPP has been subject to criticism. Despite it being central to the environmental legislation of the European Union, the European Court of Auditors (2021) found its application was applied unevenly across policies. Furthermore, EU budget had been used to ameliorate environmental damage that should have been paid for by responsible parties. Yet defining who is responsible is open to debate. Caney (2005) questioned whether ‘polluters’ are the corporations who produce hazards in the first place, the consumers of the goods whose

buying power contributed to its release, or the states in which the degradation was allowed to take place in. Ascribing responsibility and achieving 'justice' is therefore a challenge.

While energy justice lacks the environmental justice's emphasis on race dimensions it does extend injustice into the development of renewable energy that has emerged in response to the climate emergency. The development of wind energy in Ireland has divided public opinion and communities themselves. Seen by the state as vital in reducing greenhouse gas emissions from the energy sector, wind farms have been imposed into rural areas, often without consent. In this, 'local' landscapes are exploited for the greater (global) good (Mason and Milbourne, 2014). Climate change is mitigated through a technological fix and 'business as usual' is enabled through the provision of clean energy. This has sparked debate across justice scholarship.

Industrial bogs in midlands Ireland have been closed and increasingly converted into wind farms (e.g. Mountlucas, Co. Offaly; Littleton, Co. Tipperary/Co. Kilkenny; Oweninny, Co. Mayo). Environmental hazards such as bog slides have occurred as a result of renewable energy being misplaced in the landscape (McSweeney, 2021). Disruption to life systems and loss of visual amenity are compounded with the sense that profits are distributed unfairly. Renewable energy revenues accrue to large companies and select landowners (Day, 2021). In response to the contested nature of a wind energy development in Wales, Mason and Milbourne (2014) argued for 'landscape justice' in which non-expert, local knowledges and lifeways are accommodated and valued. This is on contrast to current approaches in Wales where spatial and technological decisions are made externally (O'Sullivan, Golubchikov and Mehmood, 2020). Day (2021) argued that energy systems should be considered in the context of climate justice. She found that in general, renewable energy enjoys strong public support, while in practice development is often unwelcome when situated within communities. Therefore, there are justice implications that must be considered when developing wind energy installations.

Policy which aims to end fossil fuel extraction and utility has its own equity dimensions (Snell, 2018). According to the International Labour Organization (2015: 4), the provision of "decent work, poverty eradication and environmental sustainability are three of the defining challenges of the twenty-first century." Renewable energy projects provide minimal employment opportunities following construction. Roles in maintaining the functioning of wind farms are specialised, technical positions. With industrial-scale peat extracted halted in Ireland and wind

farms operational in a number of cutaway bogs, long-term manual labour jobs are scarce. This has had socio-economic consequences for rural communities. Calls for a 'just transition' (JT) for those affected echo across the Irish midlands.

2.6.3 Towards a just transition

The transformation of raw materials (like peat) into usable fossil fuels is enabled only by complex processes across a network (Mitchell, 2011). For Bridge et al. (2018) energy systems are political as well as economic spaces. Huber (2019: 553) added that “resources become an object of political contestation between groups over their immediate useful properties and value generating potential.”

The metabolism of energy for use across society is enabled through human labour (Bouzarovski, 2022). However, there are far fewer jobs on a wind farm than in a production bog. Transformative climate action can result in ‘winners’ and ‘losers’ (Winkler, 2020). Geels (2011: 24) acknowledged that transitions of such systems are “complex and long-term processes comprising multiple actors.” In the transition of the Irish peat sector, Banerjee and Schuitema (2022) identified the winners as renewable energy companies and workers and communities dependent on fossil fuel industry as the losers. This scenario illustrates the political ‘trade-offs’ to be decided as part of the transition process (Newell and Mulvaney, 2013: 132). Yet sustainability transitions, which contribute to the greater good and position renewable energy corporations as winners, remain unattractive for capitalists, given their profit motive (Geels, 2011) and the high cost of investment. These projects therefore have to be supported by the state in order to make private investment attractive (e.g. The Irish government’s Renewable Energy Feed-in Tariff scheme). However, the politics of energy transition goes far beyond state intervention within the sector.

JT is trade unionists’ contribution to the ongoing environmental debate (Rosemberg, 2020). Both Bell (2020) and Stevis (2021) have examined the history of just transition, with the latter offering a comprehensive overview. Bell locates its origins to the 1970s, while Stevis is more specific in identifying the establishment of a workers’ ‘superfund’ in the late-1980s as its genesis. According to Snell (2018: 552), it was developed by worker representatives to “remind governments, environmentalists and others about the social implications of environmental protection.” The International Labour Organization (2015: 4) argued that just transition should lead to an “environmentally sustainable economy” for the benefit of all people, whilst

contributing “to the goals of decent work for all, social inclusion and the eradication of poverty.” Stevis identified the first use of the term ‘just transition’ to a 1995 presentation on water quality by trade unionist Les Leopold from the Oil, Chemical and Atomic Workers’ Union. In this contribution, Leopold (1995) described representing 100,000 employees in ‘toxic’ industries. Calling for a just transition for those impacted by the ‘sunsetting’ of polluting industries, Leopold argued an appropriately implemented just transition should result in no loss of earnings for workers affected by the closure of environmentally harmful enterprise. Instead, the burden would be shared out across society. As part of this, a ‘superfund’ should be established to aid workers in transition, guaranteeing full wages until a new job was acquired. Alternatively, money would be provided for education or relocation. In short, a just transition must “explain how to shift from high- to low-carbon development paths, while ensuring no one is left behind (Winkler, 2020: 1).”

2.7 CONTEMPORARY DEBATES IN JUST TRANSITION

Changes in policy and a rapidly warming planet have stimulated new debates in Just Transition. Ireland’s just transition commissioner Kieran Mulvey (2020a: 4) defined it as “A vision which sets out a series of economic and social interventions needed to secure and shift economic and social activity in an area dependent on an extractive economy to jobs and activities relating to a regenerative economy.” JT has been expanded to include the communities directly affected (Bray, Montero and Ford, 2022). This is notable in the spatial emphasis in Mulvey’s definition. However, it is top-down in focus, rather than bottom-up. For Agyeman (2013), employee participation in JT decision-making process is necessary.

At the core of JT lies a linkage between ‘climate action’ and ‘social fairness’ (Snell, 2018: 552; Newell and Mulvaney, 2013; Burke, 2022). Moreover, Leopold (1995) had argued justice for both the environment and workers was inextricably connected. However, tension, and even suspicion, can arise between trade unionists and environmentalists (Rosemberg, 2020). Bell (2020) outlined how trade unionists had accused environmentalists of putting ecological matters ahead of the needs of the working class. Conversely, environmentalists accused trade unionists of putting jobs ahead of sustainability. However, Stevis (2021) contended that the jobs vs. environment discourse is erroneous. The slogan ‘There are no jobs on a dead planet’ has reverberated across the trade union movement in recent years. Leopold (1995) claimed that just transition resolved the conflict between work and the environment.

Just transition gained significant momentum when adopted in the United Nations (2015) Paris Agreement. Stevis, Morena and Krause (2020) contend this is the point where just transition became ‘mainstream’. In this landmark deal, signatories committed to increasing Earth’s temperatures by no more than 2 degrees above industrial levels (ideally no more than 1.5 degrees). This would necessitate a move away from fossil fuels, and result in job loss for workers in those industries. In accepting the just transition imperative therein, nation states must endeavour to replace polluting jobs lost in the transition with sustainable occupations.

‘Green jobs’ are at the heart of JT. These, theoretically, contribute to environmental, economic and social sustainability (Felli, 2014). Following the financial crash of 2008, a critique of the narrative surrounding ‘green jobs’, ‘green growth’ and the ‘green economy’ emerged (Rosemberg, 2020). Contributions were made which argued that ‘greening’ maintained global inequality as developing nations could not compete with their developed counterparts for investment. Unions argued that members’ new roles may not necessarily result in better working conditions. Furthermore, gender issues at work were not necessarily considered in ‘green’ employment. Nevertheless, the green jobs discourse sowed the seeds for new thinking around sustainability in the context of employment.

Other concerns persist. Stevis, Morena and Krause (2020) identified a disparity between government commitments and praxis. The omission of actionable JT policy leads to marginalised communities burdened disproportionately, resulting in conflict and opposition to climate action. They explained how this played out in late-2018 when workers took to Parisian streets to protest, in what became known as the Yellow Vest movement. Workers were angry that energy transitions were being funded through increased taxes on fuel. The cost of transition had effectively been socialised, with ordinary working people paying the price for sustainability instead of the corporations who had previously benefitted from the fossil fuel economy. The actions of the French government went against the principles it had agreed to in the Paris Agreement. Healy and Barry (2017) argued that policymakers must consider the justice implications of their energy transition strategy. Correctly implemented JT will limit social dissent.

Healy and Barry (2017: 452) described the JT process as “intensely political” and as a “deeply political struggle”. The concept can be understood along a scale from a moderate viewpoint all the way along to a more radical perspective. Agyeman offered the latter. He argued that JT

should “eliminate the structures and institutions that reproduce injustice (Agyeman, 2013: 46).” Burke (2022) agreed, advocating for a JT that rejects capitalism’s imperative for continual economic growth. Mitchell (2011) cast doubt over the governance of transitions. He argued that political systems which developed to oversee fossil fuel economies may not be fit to manage the transition to ‘greener’ technologies.

There are significant challenges in developing and enacting justice-oriented policy in a neoliberal world economy. Swilling (2020) argued that private ownership of the means of production is incompatible with the implementation of JT. He proposed a hybrid system of capitalist and post-capitalist systems. In this, private ownership and investment would remain, but the commons – resources held neither by private interests nor the state, but instead by collectives, would be expanded. Furthermore, social entrepreneurship and innocuous use of natural resources would be encouraged. A turnaround in political direction from neoliberal to post-capitalism governance may therefore be a requisite in order to properly implement JT, or rather, a ‘just transformation’ (Scoones, Newell and Leach, 2015). Stirling (2015) differentiates the two models. Transitions are “managed under orderly control (ibid: 62).” Transformations differ greatly, involving “More diverse, emergent and unruly political alignments, challenging incumbent structures, subject to incommensurable, tacit and embodied social knowledges and innovations pursuing contending (even unknowing) ends (ibid).”

Swilling (2020: 6) situated just transition in a broader sense, by arguing that it should comprise a series of ‘radical’, but ‘incremental’ steps in a world transformed both by the United Nation’s Sustainable Development Goals (SDGs) the concept of ‘sustainability’. Transitions from one fuel to the next in the past, for example, from coal to oil, have been long, drawn out processes (Smil, 2016). Healy and Barry (2017) argued for a rapid transition away from fossil fuels so as to meet the challenges posed by climate breakdown. However, uptake of renewable energy technologies has been relatively slow (Smil, 2016). Bridge et al. (2018: 229) add that transitions from one energy system to another have not been “singular events, but socio-technical processes involving multiple changes in different sectors of the economy, at different scales and at different times.” In Ireland, the move from peat to wind energy has been slow.

Some recent JT research has drawn from sociotechnical transition literatures (Stavis, Morena and Krause, 2020). Sociotechnical transition is defined as “deep structural changes in systems, such as energy, that involve long term and complex reconfigurations with technology, policy,

infrastructure, scientific knowledge, and social and cultural practices towards sustainable ends (Newell and Mulvaney, 2013: 133). Lawhon and Murphy (2011: 357) add that socio-technical systems are “Transitions – or system innovations – [which] occur when there is a disruption in the system that results in a new ‘architecture’ or system structure,” and “...are organised, transformed and reproduced by multiple types of actors and institutions operating within or outside a society and at different levels.” However, Lawhon and Murphy (2011: 360) identified weaknesses in the socio-technical transition model such as its emphasis on technology over “context-specific social and political relations,” as well as apparent ‘bias’ towards powerful stakeholders.

Lastly, the now widespread use of the term ‘just transition’, like ‘sustainability’ before it, could result in its meaning being lost. Snell (2018: 551) noted JT’s current “lack of conceptual clarity” while Heffron and McCauley (2018: 74) said that the terms ‘transition’ and ‘justice’ are oftentimes distorted in the literature. Felli (2014) found that its popular usage arose from this ambiguity. He said, “Just transition owes its success to the fact that it has somehow become an empty signifier through which conflicting visions can be expressed without... [exposing] disagreements (Felli, 2014: 379).” With a lack of clarity on what just transition is, it may be difficult for society (and especially policymakers) to implement this much needed and requested process (Heffron and McCauley, 2018).

2.8 JUST TRANSITION RESEARCH IN IRELAND

Recent case studies in JT literature have paid particular attention to the transition of coal industries of Australia (Snell, 2018; MacNeil and Beaman, 2022), Canada (Mertins-Kirkwood and Hussey, 2020; Gürtler, Beer and Herberg, 2021), South Africa (Barnes, 2022; Cock, 2021), Germany (Reitzenstein, Schulz and Heillmann, 2020; Mercier, 2020; Kolde and Wagner, 2022; Gürtler and Herberg, 2021), China (Zhang et al., 2022; Wang and Lo, 2022), India (Blankenship et al., 2022; Malik and Bertram, 2022), the United States (Mayer, 2018; Cha, 2020; Crowe and Li, 2020; Hess, McKane and Belletto, 2021; Cha, Wander and Pastor, 2020) and Poland (Nowakowska, Rzeńca and Sobol, 2021). JT is increasingly being extended into a broad range of other resource sectors, including forestry (Lo, 2021), the bioeconomy (Lima, 2022) and food systems (Tribaldos and Kortetmäki, 2022).

JT research in Ireland has slowly emerged. Agriculture is Ireland's largest emitter of greenhouse gases at 37.1% of the country's total in 2020 (Environmental Protection Agency, N. D.b). In her analysis of the sector, Murphy (2022) argued that policymakers must ensure that workers are supported as farming moves to more sustainable activities. The focus nevertheless has been on the closure of Irish peat industry and the impact on the wider Midlands region. The Irish state appointed Kieran Mulvey as just transition commissioner in November 2019 (Department of Environment, Climate and Communications, 2022c). Mulvey produced four reports (2020a; 2020b; 2020c; 2021) examining the issues pertaining to the closure of the midlands peat industry. His role was to "engage with relevant stakeholders in the Midlands region and to recommend the essential elements of a just transition for workers and communities (Mulvey, 2020a: 9)." His remit was to make recommendations for the future of the midlands, rather than exploring historical decline. However, Mulvey (2020a, Chapter 5: 5.1) made brief reference to historical transitions, concluding that the closure of Irish sugar beet plants in 2005/6 "is possibly the only comparative example in modern times (Mulvey, 2020a: 49)." However, the present study argues that the long, slow closure of the peat industry of the past (e.g. ESB power stations, BnM briquette factories, bog groups) and the implications for their respective stakeholders provide the most relevant data for comparative analysis when considering the closure of the peat industry today.

Academic study of the contemporary Irish bog transition from a socio-economic, justice and human geography standpoint has been limited. Mercier (2020) produced a research paper for the National Economic & Social Council identifying lessons for Ireland from four cases of transition in Scotland, Germany and Australia. She concluded there is no single model of JT that can be applied to Ireland. Häyrynen, Devery and Banerjee (2021) place the state at the centre of their analysis of the transitioning, 'contested' midlands peat landscape. They tacitly identified the social nature of Irish bogs when they stated (ibid: 74): "The bog is enmeshed within ideals of national self-sufficiency, independence and a deep attachment to rurality and nature. It is not just a passive landscape; it is entwined with social, cultural, economic, political, and environmental aspects of life in the Midlands." Häyrynen, Devery and Banerjee acknowledged the socio-economic and environmental values of the bog landscape and how they have come into conflict. However, they make little reference to the challenges of rehabilitating the landscape itself. Banerjee and Schuitema (2022: 3) highlighted the importance of restorative justice, and argued that workers themselves need to be "rehabilitated", therefore, "restoring their status and dignity [and] their sense of trust and

respect.” Yet they make only passing comment on the rehabilitation of the bogs which were the locus of their labour. Instead, the amelioration of these eroded landscapes has become the focus of ecologists and scientists.

2.9 CONCLUSION

This chapter critically engaged with the concept of nature. There are no untouched, ‘virgin’ bogs remaining in Ireland. All have been altered by people to various degrees. They have been produced anew through labour. While this is regrettable for the environmental movement, Cronon (1996: 80) remarked, “The dream of an unworked natural landscape is very much the fantasy of people who have never themselves had to work the land to make a living.”

Those who have worked the bogs are increasingly being removed from them, with justice implications. Workers and communities that depend on them are facing socio-economic decline as these landscapes are revalued for their ecosystem services. Now the bogs are being repurposed for conservation, amenity and carbon storage. The only work available to peat workers is short term restorative actions like drain-blocking and landscape reprofiling. Yet the emergence of this new social nature landscape may help the Irish state arrest the biodiversity and climate emergency it declared in May 2019.

A well managed just transition ensures working people embrace decarbonisation (Leopold, 1995). Moreover, recent contributions to just transition literature have acknowledged the importance of communities in the process, and the need for their contribution into the transitional process (Snell, 2018). A transition which meets social, economic and ecological outcomes is therefore necessary for midlands Ireland.

Footnotes

¹ This definition built upon that of the International Union for Conservation of Nature (IUCN) (European Wilderness Society, 2019). In this, wilderness area (management category Ib) is described as: “Large unmodified or slightly modified areas that retain their natural character without permanent or significant human habitation, which are protected and managed so as to preserve their natural condition (International Union for Conservation of Nature, N.D.).” The IUCN added there should be no motorised access to the wilderness area, they should be sufficiently large in order to maintain biodiversity, contain predator/prey dynamics, including that existing between large mammals, and be free of ‘excessive’ human utilisation and presence. They conclude that “biological

intactness” should be the priority. Only then can focus move towards recreation or “cultural values.” Natural forces are prioritised, but humans are not excluded.

² The European Wildlife Initiative provides guidelines on the extent of these spatial arrangements. Core wilderness sites should be 3,000 ha in size, with older sites of 2,000 ha accepted if they have the potential to grow to 3,000ha. Wilderness zones of at least 10,000 ha are desirable.

³ This is then buffered by a restoration zone and a transition zone. The core wilderness will gradually move into the restoration zone over a ten year period. The transition zone remains in place to protect the wilderness with limited human utilisation permitted. In this, wilderness is produced by people.

CHAPTER THREE: METHODOLOGY

3.1 INTRODUCTION

The following chapter outlines the scope of the study and the rationale for the collection and use of data.

A methodology is developed. The qualitative approach utilised is commonly used in human geography. Emerging from this are the methods employed: semi-structured interview. Details around how the fieldwork was conducted and how the data was handled and analysed are then discussed. A list of interviewees are included. Following the transcription of the interviews, analysis began. A list of codes were produced and are included at the end of the chapter. These assisted when writing up the findings into Part II of this thesis.

3.2 CONTEXT

This research was conducted during a fluid, fast-moving political, economic, social and environmental context. The peat industry was effectively closed during the study. The Covid-19 pandemic brought movement restrictions which impacted on fieldwork. In March 2018, the Littleton briquette factory was shut down. Later that year BnM commenced a redundancy programme where 430 people were let go. In May 2019 the Irish government declared climate and biodiversity emergencies and in September of that same year, a High Court ruling effectively banned peat extraction on bogs above 30 hectares. At the end of 2020 the West Offaly and Lough Ree peat-fired power stations were closed. In January 2021 BnM announced the cessation of its peat harvesting operations. The tension, worry and concern that resulted amongst workers and decision makers presented its own problems and made data collection challenging.

3.3 RESEARCH SCOPE

Following their review of just transition literature, Wang and Lo (2021: 1) called for further empirical research. By critically exploring the ongoing midland transition from its peat dependency, this research speaks to that need through a justice-informed, spatiotemporal,

social nature approach. This study identifies the challenges of transitioning away from peat-for-energy (PFE) in the present day. PFE includes peat used in electricity generating power stations, briquette factories and domestic settings for heating and cooking. However, it uncovers a slow transition taking place through time.

This research project is not a study *of* BnM, the ESB or the NPWS. It takes a general rather than specific overview of PFE within the midlands of Ireland, drawing on a range of examples rather than a limited case study approach. Moreover, this study engages with both spatial and temporal dynamics in its analysis of human/environment relations.

This study does not investigate the horticultural peat sector, which is undergoing its own contested transition. BnM and several private companies have extracted peat-for-horticultural (PFH) purposes in Ireland and sold it on to other businesses to be used as a growing medium. Teagasc recently began its 'Beyond Peat' project in response to these challenges.

3.4. METHODOLOGICAL APPROACH

A methodology is a theoretical position concerned with what can be researched and how this might be done (Baxter, 2016). A study's methodology is informed from its ontology and epistemology (Jones and Gomez, 2010). Methods, the practices of data collection, emerge from the methodology.

Shaw, Dixon and Jones (2010) consider debates surrounding monism and dualism as central to ontology. They explain that the former holds that phenomena are deeply interconnected, whilst the latter promotes a vision of difference. An example of a dualism is nature/society. In this nature, wildlife, geological features, plants and so forth, exists *external* to culture – the human social world. However, this study rejects this binary and adopts a monist ontology which finds that that nature and culture have merged through the process of human labour in the landscape (see Chapter Two).

This study's epistemology recognises that the human knowledge is dependent on context and power dynamics. It accepts that arbitrary binaries are constructed by those in positions of authority and influence arising from privilege associated with class, sex or race (Shaw, Dixon and Jones, 2010). Furthermore, this research contends that phenomena is ever-evolving. This

vision is in line with Gilles Deleuze's concept of 'becoming', which Gomez and Jones (2010: 438) defined as the circumstance where "human and non-human forces are always influencing each other and creating hybrid and uncertain productions." This is most explicitly borne out when considering the unpredictable future prospects for cutaway bogs (discussed in-depth in later chapters). However, this research does not exclude the positivist perspective. It accepts, for example, the measurable reality of human-induced climate change advanced by the Intergovernmental Panel on Climate Change (2021). Nevertheless, the research acknowledges that the peatlands of Ireland are understood differently by various groups (e.g. scientists, turf-cutters, policymakers) and also by individuals within them. This research aims to collect, present, engage with and understand these perspectives.

3.5 METHODS

Both primary and secondary data collection methods were conducted for this study. To make sense of how the bogs were experienced in the past and understood today by differing stakeholders a qualitative approach was applied. Qualitative research is routinely adopted in human geography as it facilitates an understanding of social contexts and individuals' lived experiences (Winchester and Rofe, 2016). Primary data was collected through semi-structured interviews, site visits and casual interactions. This informs Section II of this study. Secondary research employed a desk-based approach incorporating textual analysis of academic books, government reports and journal articles. This research informs Part I of this study. Additionally, photographs and videos were taken with a smartphone (which enabled geolocation) during fieldwork.

The qualitative approach is not without its drawbacks. Sample size tends to be smaller than in quantitative research. According to Winchester and Rofe (2016) it is not usually generalisable as it tends to seek multiple meanings rather than a single 'truth'. Nevertheless, this study aims to ameliorate this weakness by consulting a range of viewpoints across space from a diverse selection of interested parties.

3.5.1 Semi-structured interviews

This research study employed the semi-structured interview approach to understand recent and past events, and gauge future developments. For example, ecologists were asked about the

rehabilitation of cutaway bogs what would happen to them in the future. A land manager was interviewed about after-use projects of the past.

Talking to people (especially in an interview format) is a useful form of knowledge-gathering where it is not possible to experience or observe a given event yourself (Secor, 2010). There are three types of interview: structured, semi-structured and unstructured (Dunn, 2016). Structured interviews see participants asked to answer a list of the same questions, often in the form of a questionnaire or survey. The semi-structured interview is different. Longhurst (2010) described it as a verbal exchange between an interviewer and a research participant, where the former attempts to gain information from the latter by asking predetermined questions. He added (*ibid*: 105) that semi-structured interviews are “conversational and informal in tone”, though Dunn (2016: 149) cautioned that there is much more to these interactions than simply “having a chat.” Moreover, participant responses go far beyond simple “yes” or “no” type answers (Longhurst, 2010). However, the semi-structured interviews carried out as part of the present study nevertheless had a sense of formality. They were pre-arranged, held in private, documentation was signed and interactions were recorded. Whilst relatively structured, there is freedom and flexibility in this approach as it enables participants to discuss topics to varying degrees of depth, with room for some deviation (Dunn, 2016). In the present study, the semi-structured approach allowed for unexpected and surprisingly important conversation threads to emerge (e.g. Alan’s (3) conversation about his turf-cutter representation at Clara Bog; Nick’s (16) disclosure about his turf-cutting activity).

There are nevertheless concerns with the interview method more generally. There are no guarantees that interviewees will tell the truth (Secor, 2010). This is especially pertinent when relying on oral histories where memories can be unreliable and bound up in personal values (Robbins, 2010). Dunn (2016) noted the extent of preparation and follow-up procedure required when interviewing. Identification of participants, background research, arranging the date and location of the meeting, and the development of questions takes considerable time.

Interviewees were sought through the researcher’s existing networks established during a previous study and through the snowballing technique. In the latter, a participant is identified and asked to provide a point of contact into a given scenario that the researcher hopes to investigate (Secor, 2010). Participants in this research assisted in identifying colleagues and acquaintances who might be interested in participating. However, the snowballing technique is

not without its drawbacks. It can lead to a form of gatekeeping, where the person providing names pushes the study in a particular direction (often unknowingly) outside of the researcher's own knowledge. Nevertheless, the snowballing technique proved beneficial during this study as it helped the researcher find stakeholders who have been difficult to identify without local knowledge.

All research participants worked with, or in, BnM bogs either directly or indirectly. They included operators, scientists, ecologists, managers and small business owners. The project aimed to understand the transition of industrial bogs at a broader scale, rather than at a specific case study site. Given its centrality in the story of Ireland's peatland utilisation, BnM was well represented. Seventeen participants – almost half of participants worked, or had worked, for the company in the past.

3.5.2 Informal data collection

A series of informal site visits were conducted during this research to collect information in situ. Examples included a tour of the Lough Ree power station, an excursion around sites linked to the Lough Boora Discovery Park, a visit to the closed Littleton briquette factory and a trip around the group bogs that once supplied it to discuss their rehabilitation. Casual conversations were had with informants in these scenarios. All participants were aware that they were being recorded and data was handled as per ethical guidelines. Video and audio were recorded at particular points of interest. Unfortunately wind noise impacted on some of the outdoor audio recordings. Photographs were taken on site visits and are included throughout this study for illustrative purposes. A drone was used to collect images of bogs in various states of alteration.

While on fieldwork, conversations were had with individuals encountered by chance. Most of these were very short interactions. Some were recorded. Given that these people did not consent to participating in a formal capacity their data is used in such a way that it cannot identify them.

3.5.3 Alternative methods

Other methods for collecting data were considered. These include focus groups, ethnography and oral history.

Focus groups, or 'group interviews', see participants engage in verbal exchanges amongst themselves (Secor, 2010: 199). This "can provide insights into how meanings, events or

experiences are contested (ibid).” A focus group which brought turf-cutters and government officials together was a desirable research scenario but not possible due to Covid-19 restrictions on gatherings. Ethnography was also considered. This is the “written representation of a culture (Van Maanen, 2011: 1),” that assists in the understanding of “a particular slice of a social life (Smartt Gullion, 2016: 3).” An ethnographic study that placed a researcher either in a peat-dependent community or working with BnM employees directly would have had significant empirical value. It was not selected due to budgetary constraints. Moreover, a Participatory Action Research study which sees an academic work with participants to identify, research and ultimately solve a problem impacting on their lives (Kendon, 2016) was considered in the context of community response to the end of peat production. This too was ruled out due to the cost and time required.

Oral history approach was not adopted but instead influenced the semi-structured approach that was chosen. Dunn (2016) placed the oral history method in the unstructured interview category. It sees a researcher gain “first-hand knowledge of a subject of interest (George and Stratford, 2016: 190),” albeit with a temporal dimension. They conceive of oral history as a means to travel back in time to a given space to understand a situation through the participant’s eyes. They conclude that it is a useful method to “better understand space, place, landscape, region, and environment in ways that are sensitive to context (ibid: 191).” The approach has its drawbacks however. Dunn (2016) noted that oral history (among other forms of unstructured interview) requires even more preparation on the part of the interviewer than their semi-structured counterpart. Robbins (2010) acknowledged the insightful nature of oral history, but noted that it can produce contradictory narratives. Furthermore, he argued it can lead to significant power imbalances between the interviewer and the interviewee, but accepted this can be mitigated against with a sound ethical framework.

3.6 DATA COLLECTION AND ANALYSIS

Fieldwork was conducted over four phases. Phase 1 was conducted during the summer of 2019. After a short break the second phase began in the autumn. During the winter of 2019 and into 2020 the interviews from Phase 1 and 2 were transcribed. Phase 3 commenced in March 2020 with two interviews and a site visit to the ESB Lough Ree power station in Co. Longford. However, data collection was suspended due to movement restrictions imposed as part of the state’s response to the Covid-19 pandemic (see Appendix 1).

3.6.1 Ethics and gender

Ethical considerations are at the centre of contemporary academic inquiry. According to Hay (2010: 35), “Ethical research in geography is characterized by practitioners who behave with integrity and who act in ways that are just, beneficent and respectful.” Activities by the present researcher adhered to these principles throughout the course of the study. Hay added that ethically-informed inquiry protects the legal rights of participants, enables good quality research to be collected through the development of strong relationships built on trust, and safeguards the legal standing of the host university.

Third-level institutions have ethical guidelines that must be complied with during fieldwork. Prior to the commencement of this study’s data collection phase, an ethics application was by the researcher to Trinity College Dublin. During this process it was identified that questions of a ‘sensitive nature’ would be asked or discussed with participants.

Interviewees should be fully informed of the nature of the study before giving their consent to participate (Dowling, 2016). Therefore they were provided with a participant information form (see Appendix 2) and a consent form (see Appendix 3), along with a bespoke list of questions that would be discussed (an example can be found at Appendix 4). Dunn (2016: 158) described the latter as an ‘interview guide’. Informal conversations with people met whilst in the field were anonymised in the thesis.

The researcher abided by General Data Protection Regulation (GDPR) guidelines during data collection. Initially, the study would see participants speak ‘on the record’ or anonymously. Conversations with interviewees veered towards redundancy payments and family, for example. At no point were participants asked direct questions of a particularly sensitive nature; such information was divulged voluntarily. To protect their privacy, the researcher committed to taking the following steps:

1. Contributors were offered anonymity. All but one chose to speak ‘on the record’;
2. Transcriptions of formal interactions were sent to participants for review;
3. The researcher filtered sensitive data which nevertheless had passed inspection (e.g. individuals’ redundancy payments).

To ensure identities were protected, it was later decided to anonymise all contributions regardless of consent. This provides the highest levels of privacy for participants. Images of

participants are used, but only where their faces are not visible. This has implications for the research however, as it means some data collected is not used. Dates of employment are also withheld.

While this study ensures a high level of data protection, there is a weakness present in its gender dimension. The history of Ireland's peatlands is one where men, women and children all participated in the saving of turf. Both men and women worked in the peat industry. Clarke (2010: 36) described how employment was gendered in the early years of the company (1930s – 1940s): "There were many labour problems – for example, men refused to foot turf because footing turf was for women and children and men were adverse to taking on this work in any circumstances."

Men dominated formal roles in BnM. Clarke (2010) noted that the women and children were casually employed to foot turf during its first development programme. They were often family members of the men who worked in the company. BnM remained a male-dominated company during its industrial peat extraction years. Loftus and Laffey (2015) collected the names of BnM and ESB employees working at the Oweninny bog group and the Bellacorick power station they supplied. These records, which stretch from the early-1950s until the close of the operation in 2005, provide documentary evidence of the extent of male employment in the Irish peat industry during this time.

Of the 36 people who formally participated in this study, just four were women. This weakness is because the study focused on gathering workers' perspectives. Given that men made up much of the peat industry's labour force, especially in operations, gender imbalance was unfortunately inevitable. When the study engaged with stakeholders outside of peat operations and oversight, gender balance improved. However, there is scope for further improvement.

Ethical approval was granted under the Trinity School of Natural Sciences' Policy on Good Research Practice V3.0 on 5th of June 2019. The first formal interview was conducted on the 19th of June 2019.

3.6.2 Interview and transcription process

In October 2018, nine months before the commencement of this study's fieldwork, Lee (2018) reported that 17 BnM production bogs would close imminently with the remaining 45 shut by 2025. The company's managing director Tom Donnellan informed Lee that these measures

were being taken in response to climate change. 430 workers would be made redundant. It is in this rapid wind down phase, prior to the notice of formal closure of the bogs, that interviews 1 – 32 were conducted; 33 – 35 were recorded in Summer 2021.

Interviews were arranged at various locations across the midlands of Ireland and Dublin. Formal interactions lasted for up to two hours. The shortest formal interview was just over half an hour. Meetings with those consulted at work tended to last one hour – a standard meeting time. Retired individuals often spoke for longer, given their availability and many years of experience. These interactions often influenced by the oral history approach. In some cases the interview started from an identified point of interest and continued through the decades. Participants were asked to identify and explain important points along the timeline. Some of those who participated began work in BnM the 1970s or 1980s.

All formalised interviews were recorded for later transcription. Two devices were used in the event a technical issue arose. In one interview, a recording device failed but the back-up ensured that the data was secured. Moreover, it is important to ensure that audio quality is of a high standard in order to produce a usable ‘sound document’ (George and Stratford, 2016: 196). This facilitates higher levels of accuracy in the eventual transcription. Interviews were held in private settings including offices, meeting rooms and participants’ cars to ensure that recordings attained a sufficient audio quality. Informal conversations outdoors and audio/video recording on site visits produced mixed results. Professional grade sound equipment is recommended for similar fieldwork in the future.

All 35 interviews conducted in the course of this study were manually transcribed by the researcher using ExpressScribe. This had benefits, but also drawbacks. According to Dunn (2016), a one hour interview will require four hours of transcription by a competent typist. Some of the interactions for this study were two hours long. Considerable time was therefore spent transcribing each interaction. However, this ensured a high level of accuracy and helped the researcher to familiarise himself with the data. Furthermore, it reduced the costs of the project as hired transcription services can be expensive.

Interviews transcripts were checked against the audio before they were sent to the respective participant for review and approval. For interviews conducted during Phases 1 – 3, analysis of the transcripts did not begin until final approval by participants. While it is not a necessary part

of the study, participant verification upholds accuracy, enables participants to make retractions, and contributes towards good relations being maintained between the researcher and interviewees. However, Dunn (2016) said that the verification process can take time. This is because it increases the researcher’s administrative workload and inevitably delays the analysis process. Following the fourth phase of the fieldwork, the researcher decided to modify the approach taken. Transcripts were sent to participants and they were invited to review them at their own discretion. Analysis began once the transcript had been written and checked by the researcher. This ensured there were no further delays whilst ensuring participants could make corrections if they so wished.

Table 3.1 Formal participant details

No.	Pseudonym	Role	Organisation	Date	Location
1	Donal	Manager	BnM	19/6/19	BnM HQ, Co. Kildare
2	Bob	Operator	BnM (retired)	9/7/19	Trinity College, Co. Dublin
3	Alan	Community activist	Irish Rural Link (previously operator with BnM)	12/7/19	Moate, Co. Westmeath
4	Ed	Community activist	Kilcormac Development Association (BnM, retired)	17/7/19; 7/7/20	Kilcormac and Boora, Co. Offaly
5	Ian	Operator	Formerly BnM (made redundant)	19/7/19	Athlone, Co. Westmeath
6	Frank	Ecologist	BnM	8/8/19	BnM Littleton bog group, Co. Tipperary and Co. Kilkenny
7	Fred	Environmental campaigner		9/8/19	Co. Dublin

8	Gary	Community activist (Operator)	Kilcormac Development Association (BnM, retired)	13/8/19; 7/7/20	Kilcormac and Boora, Co. Offaly
9	Graham	Ecologist	NPWS	15/8/19	NPWS HQ, Co. Dublin
10	Jason	Environmental professional	Formerly board member at BnM; Peatlands Council	15/8/19	Co. Dublin
11	Anne	Environmental campaigner	Irish Peatland Conservation Council	21/8/19	IPCC HQ, Co. Kildare
12	Liam	Manager	Lullymore Heritage and Discovery Park	21/8/19	Lullymore Heritage and Discovery Park, Co. Kildare
13	Elaine	Ecologist	formerly BnM	11/9/19	Trinity College, Dublin
14	Mike	Former senior manager	formerly NPWS	24/9/19	Dublin
15	Neville	Manager	Formerly Coillte	22/10/19	Trinity College, Dublin
16	Nick	Manager	SIPTU	23/10/19	Midlands Ireland
17	Oscar	Manager	formerly BnM	29/10/19	Trinity College, Dublin
18	Gillian	Scientist	University College Dublin	12/11/19	University College Dublin, Dublin
19	Gordon	Operator	BnM	26/11/19	BnM Derrygreenagh bog group, Co. Offaly

20	Rick	Operator	ESB	9/3/2020	ESB Lough Ree power station, Lanesborough, Co. Longford
21	Victor	Community activist and small business owner		9/3/2020	Lanesborough, Co. Longford
22	Barry	Manager	BnM	7/7/20; 29/7/20	BnM Boora, Co. Offaly
23	Fergus	Small business owner		16/7/20	Co. Offaly
24	Finbar	Operator	Bord na Móna AES; formerly BnM Littleton briquette factory	10/7/2020	BnM Lanespark, Co. Tipperary
25	Gabriel (25.1) Hillary (25.2)	Married small business owners: Male (1) and Female (2)		16/7/20	Walsh Island, Co. Offaly
26	Henry	Operator	BnM	18/07/20	Kilcormac, Co. Offaly
27	Hugo	Operator	BnM (made redundant)	10/7/20	BnM Lanespark, Co Tipperary
28	Kevin	Manager	Sabrina Integrated Services (formerly BnM)	31/7/20	Sabrina Integrated Services Recycling Plant, Co. Tipperary
29	Charlie	Retired ecologist	Formerly NPWS (retired)	20/7/20	Dublin

30	Brendan	Community activist and contractor	Turf-cutters and Contractors Association	23/7/20	Dublin
31	Hugh	Manager	NPWS	29/7/20	Grey Partridge Project, Boora, Co. Offaly
32	George	Ecologist	BnM	31/7/20	Bawnmore Bog, Co. Tipperary and Co. Kilkenny
33	Gregory	Civil servant	Longford County Council	14/7/21	Co. Longford
34	Dermot	Community activist and turf-cutter		16/7/21	Clara Bog, Co. Offaly
35	Cathal	Local storyteller and turf-cutter		16/7/21	Clara Bog, Co. Offaly

All formal participants are identified by number in brackets after their pseudonym. Informal participants are identified in this thesis by a letter after their pseudonym.

3.6.3 Codes

Interviews were analysed and a series of codes were produced (see Table 3.2). Secor (2010: 202) described coding as “a systematic process, in which themes, words, phrases, and interpretations are flagged within and across focus group and interview transcripts.” The codes correspond to the study’s research questions (see section 1.3). The questions asked of the participants in the interview process were informed by the present study’s research questions.

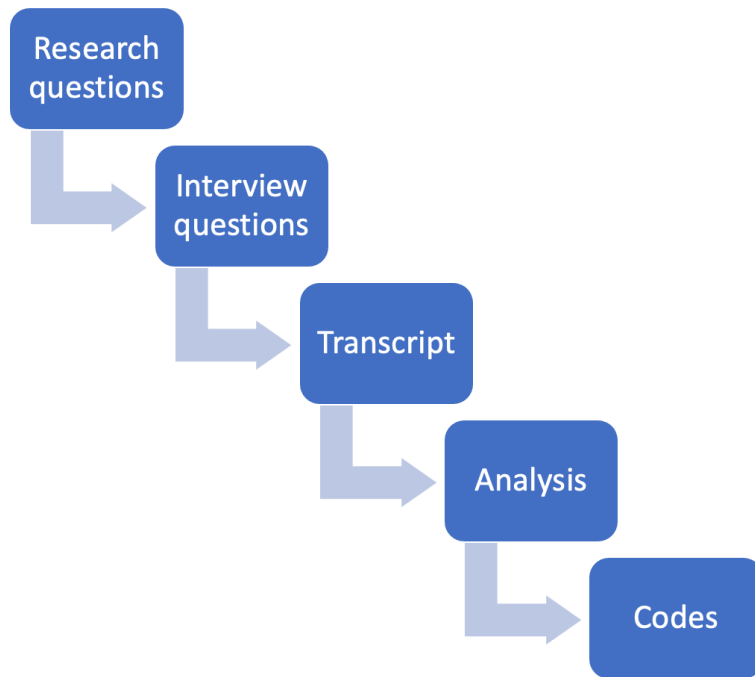


Figure 3.1 The analysis process

Nvivo was initially used in the analysis of the interview transcripts. However, the researcher found that a manual coding was more efficient. In this, all interview transcripts were printed and read by the researcher. Themes were noted. A series of codes (45 in total) were produced from this process and were placed in the margins of transcripts indicating the theme under discussion. The codes used can be found in Table 4.1 While it appears rudimentary, this system proved to be highly efficient.

Table 3.2 Codes for analysis

RESEARCH QUESTION	SIGNIFIER	CODE
1	C	Why is BnM stopping peat production?
2	A	How will employees be affected by the bog closures?
	B	How will communities be affected by the bog closures?
	D	What can be done to ameliorate the worst aspects of the closures?
	E	What are the main challenges when managing the transition?

	F	Redundancy
	G	Just Transition
	O	The meaning of the bogs
	P	The meaning of BnM and the ESB (jobs)
	Q	Family and education
	U	Losses and gains (in transition)
	3	Worries and concerns
	6	Trade unions
	9	Midlands economy
	17	Forestry in the cutaway
	18	Agriculture in the cutaway
3	L	The future of the land
	M	Tourism
	N	Amenity
	R	Biodiversity
	S	Climate and carbon
	7	Bog fires
	8	Impact of rewetting on farmers
4	H	Historical aspects
	I	Eddie O'Connor
	T	Changes in BnM through time
	V	The future of BnM and the ESB
	W	ESB specifically
	W1	ESB plants
	X	Turf-cutting
	Z	Wind farms
	Z1	Solar energy
	1	Lay-offs
	2	Enterprise groups
	12	Paludiculture and biomass
	13	New business division
	14	BnM Brown to Green strategy

Unaligned	K	Politics
	Y	Peat briquettes
	4	Heritage
	5	Environment
	10	Language
	11	BnM horticulture
	15	BnM divisions
	16	Legal challenges to BnM and/or the ESB

Once the interviews were coded, the data was written up into the findings chapters. The literature from Part I and the findings from Part II are synthesised in Part III and conclusions are drawn.

3.7 CONCLUSION

This chapter outlined the methodological approach employed during the present study. A qualitative methodology has been selected. From this emerged the methods which are adopted in this research. A semi-structured interview approach was used.

Interviews took place in counties Offaly, Kildare, Tipperary, Westmeath, Dublin and Longford. Many were ‘situated’, or other words in a relevant area such in the interviewee’s place of work. This enabled rich data to emerge. Moreover, site visits were arranged with several respondents, including tours of industrial plants and bogs in various states of alteration, including cutaway, rehabilitated, in-production and protected.

All interactions were transcribed and then analysed. A series of codes were produced. These enabled the writing-up of data into the findings chapters of Part II. The next chapter examines geographic aspects of Irish bogs.

CHAPTER FOUR:

GEOGRAPHIC ASPECTS OF IRISH PEATLANDS

4.1 INTRODUCTION

This chapter identifies and discusses geographic aspects of Irish peatlands. It begins by exploring the socio-economics of the Irish midlands where much of the raised bog landscape, the focus of this study, is located. The physical and human geography of Irish peatlands are then outlined. This leads to an examination of how the state has utilised these landscapes through time. Four key legislative mechanisms which shape these interactions are identified.

This chapter finds that people have valued peatlands differently through time. This is subject to change. Raised bogs in particular are increasingly being valued for their ecosystem services. These include habitat for wildlife, water retention and purification, and carbon storage. The latter is closely examined in an Irish context.

4.2 SOCIO-ECONOMIC ASPECTS OF MIDLANDS IRELAND

Much of Ireland's economic activity has taken place around its large urban settlements. There has been less development in the midlands. This has led to higher than average levels of unemployment historically in the region (Mulvey, 2020a). Häyrynen, Devery and Banerjee (2021: 81) described the midlands as "economically deprived." This has impacted on population dynamics. However, the emergence of the peat industry from the 1930s onwards brought jobs and prosperity to the region. Its recent closure risks the socio-economic wellbeing of the people that live there. In this section, data from the Central Statistics Offices is used to discuss the context in which the peat industry is located.

The regional categorisations (NUTS3) used by the Central Statistics Office (CSO) in the 2016 Irish Census places Offaly, Laois, Westmeath and Longford as the 'Midlands Region' (IE063, 'MR' hereafter). The population of this space was 292,300 in 2016, while Dublin county alone stood at 1,347,400 (Central Statistics Office, 2016b). Mulvey (2020a) expanded the MR to a broader midlands area incorporating parts of Co. Kildare, east Co. Galway and Co.

Roscommon which had been enrolled into the peat industry. North Tipperary should also be included in this expanded definition given the presence there of the BnM Littleton bog group and its corresponding briquette factory.

The population in Ireland is increasing. Growth rates in midland counties vary. According to data derived from Census 2016, Co. Offaly is home to 77,961 people, an increase of 1.66% from its 2011 equivalent (figures taken from CSO interactive map). This is substantially lower than the equivalent increase of 3.8% at the national level. However, Laois's population grew by 5.1% (Central Statistics Office, 2017). Described as a 'commuter belt county', this is likely due to spill over in population from the broader Dublin conurbation (ibid: 11). The average increase in population across MR counties was 3.5%, slightly lower than the national average of 3.8% (Central Statistics Office, 2016b).

Population density is relatively low in the midlands. In the 2016 Census (Central Statistics Office, 2016c), there were 45 people per km² living in the MR. This is significantly lower than South-East (59/km²), the South-West (57/km²) and Mid-East (101/km²). However, it was comparable with the Mid-West (47/km²) and higher than the Border (35/km²) and West (33/km²). Dublin was 1,458 persons per km².

Figures released by the Central Statistics Office (2020a) reveal that in 2017 MR counties had lower disposable income (€19,030) per capita than the national average (€20,714). Unemployment or underemployment may be a factor. However, in 2019 (pre-pandemic), unemployment in the MR mirrored that at the national level: 4.5% (Central Statistics Office, 2020b). The Department of Business, Enterprise and Innovation (2017) drew on statistics from the 2011 and 2016 census to reveal that employment increased in these counties by 3.3% between Q1 2016 and Q1 2017. The state average was 3.5% growth. In that time frame, they concluded that unemployment in the Midland Region had decreased by 7.8%, significantly higher than the national average of 6.4%. In Offaly, employment had risen by 10% and unemployment decreased by 31%, while in Longford, employment rose by 9% and unemployment fell by 19%. The impact of unemployment (if any) as a result of the closure of BnM bogs and the ESB peat-fired power stations they supplied will not be known until after Census 2022 census is published.

The data presented indicates that unemployment and income in the MR is marginally less than the national average. However, its relatively low population suggests that people may have left to live and work elsewhere. Moreover, Mulvey (2020a) estimated that approximately 24,000 people leave the midlands every day for work or education. Without a rebalancing of the national economy this permanent and temporary movement of people from the wider midlands is likely to continue. Efforts in the past included the establishment of Bord na Móna (BnM) and Electricity Supply Board (ESB) operations in the region. They utilised the abundant peat resources extracted from bogland for energy generation. In the next section, the physical aspects of Irish peatlands are identified.

4.3 PHYSICAL GEOGRAPHY OF IRISH PEATLANDS

Waterscapes come in many forms and to varying scales, from oceans and lakes down to streams and ponds. Human civilisation is dependent on their water for its life-giving qualities. Moreover, it experienced by people, eliciting an “aesthetic pleasure” through its “sound, motion and visual qualities (Gandy, 2006: 117).” Wetlands are environments that are neither terrestrial nor aquatic, but somewhere between the two (Silva et al., 2007). According to Keddy (2010: 2), “A wetland is an ecosystem that arises when inundation by water produces soils dominated by anaerobic processes, which, in turn, forces the biota, particularly rooted plants, to adapt to flooding.” Wetlands exist along a continuum. They are subject to seasonal variations between both ends of a terrestrial/aquatic spectrum (Silva et al., 2007). Peatlands in their natural state are a form of wetland (Joosten, 2016).

60% (+/-10%) of the world’s wetlands are peatlands (Joosten and Clarke, 2002). Foss and O’Connell (2017) note that peatlands are landscapes defined by the presence of organic substrate at a depth of between 45 cm (undrained) and 30cm (drained) at the surface level (this classification does not apply to peat underlain by bedrock). They cover 4 millions km² of the earth’s surface, with 80% still intact (Joosten, 2016: 19). In their unaltered, waterlogged and vegetated state they accumulate peat. This is natural process is enabled by the lack of oxygen in the substrate (Craft, 2016).

Peat is defined by Joosten and Clarke (2002: 24) as “sedentarily accumulated material consisting of at least 30% (dry mass) of dead, organic material.” Intact peatlands are called mires (although this term is rarely used in Ireland according to Foss and O’Connell, 2017).

With water removed through drainage, anaerobic conditions cease and peat formation ends. Oxygen is then able to penetrate the dry substrate and decomposition of the peat increases 10,000-fold (Wilson, 2021). It is the presence of water, considered the lifeblood of mires, which slows the decomposition process and facilitates the accumulation of peat.

There are three types of naturally occurring peatlands in Ireland: blanket bogs, fens and raised bogs. Peatlands typologies can be identified based on a survey of its respective plant-life (Craft, 2016). However, peatlands can exist in a multitude of different forms in one area. Neither are they static landscapes, but instead ever-evolving. For example, Scragh Bog SAC in Co. Westmeath, according to its NPWS Site Synopsis, is a fen that is slowly transitioning into an ombrotrophic bog.

Bogs are distinguished from other wetlands as their principal source of water is derived from the atmosphere (Godwin, 1981; Quinty and Rochefort, 2003). Ireland is subject to high levels of precipitation and enjoys a temperate climate, making the island ideal for the development of wetland habitats. Peatlands began forming in Ireland after the last Ice Age ended 10,000 years ago (Foss and O'Connell, 2017). Their development is slow however, with one meter of peat taking one thousand years to develop.

For Lindsay (2010: 77), bogs exist in an 'unusual imbalance' given the ongoing growth of vegetation and its slow decay. This leads to a long-term store of carbon. Quinty and Rochefort (2003) identified two distinct layers present in intact bogs (figure 4.1). At the top is the acrotelm, the 'living' part of the bog. Here, the water table naturally fluctuates. It overlays the permanently waterlogged catotelm.

Blanket bogs are mires which envelope an entire landscape. In Ireland, they are divided into two categories: lowland blanket bogs and upland blanket bogs. The former are often referred to as Atlantic blanket bogs due to their geographic location. Upland blanket bogs are often referred to as mountain blanket bogs. These are found 200 meters above sea level (Foss, 1987a). According to Rotherham (2020: 15) blanket bogs occur in places with over 1 meter of rainfall per annum, spread out over at least 160 rain days per year. Hammond (1981: 13) offered differing figures however, finding that blanket bogs would only develop in areas with rainfall of over 1.25 meters per annum over 225 rain days. The chemical composition of water supply impacts upon a given peatland's nutrient profile. Rain, which is slightly acidic, washes base

minerals from bogs and therefore contributes to their acidic nature (Bellamy, 1986). Fens on the other hand are minerotrophic peatlands, meaning they receive water at ground level, which is often nutrient rich, as well as from the atmosphere (Fossitt, 2000). They are the precursors of raised bogs.

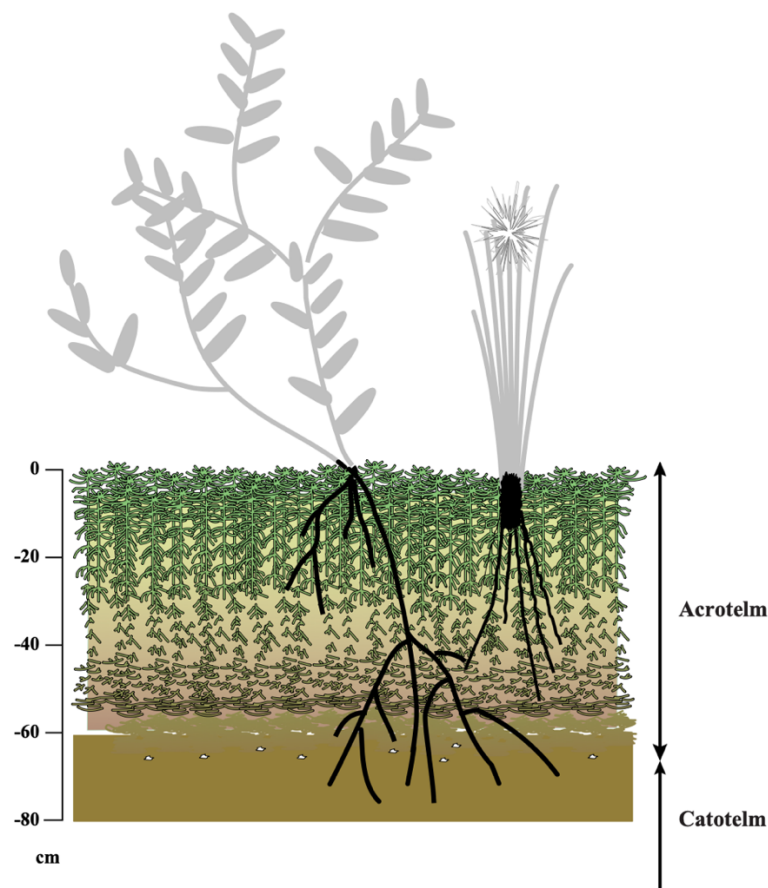


Figure 4.1 Acrotelm and catotelm Quinty and Rochefort’s (2003: 7) transection of a bog, which reveal its distinctive layers

Fens emerge from shallow lakes. As surrounding lake vegetation dies, peat accumulates in the water. This builds up and may eventually fill in the lake, forming a fen. Sphagnum mosses colonise the fen’s surface, which in time build up leading to the fen transforming into a raised bog (figure 4.2). There are two types of fen in Ireland. Rich fens are alkaline and are found in calcareous regions, whereas poor fens are normally found outside of these areas and are relatively acidic (Doyle and Ó’Críodáin, 2003). A fen’s chemical characteristics dictate the types of flora present. Rich fens contain black bog rushes and tall sedges, while tall herbs dominate poor fens (Irish Ramsar Wetlands Committee, 2018).

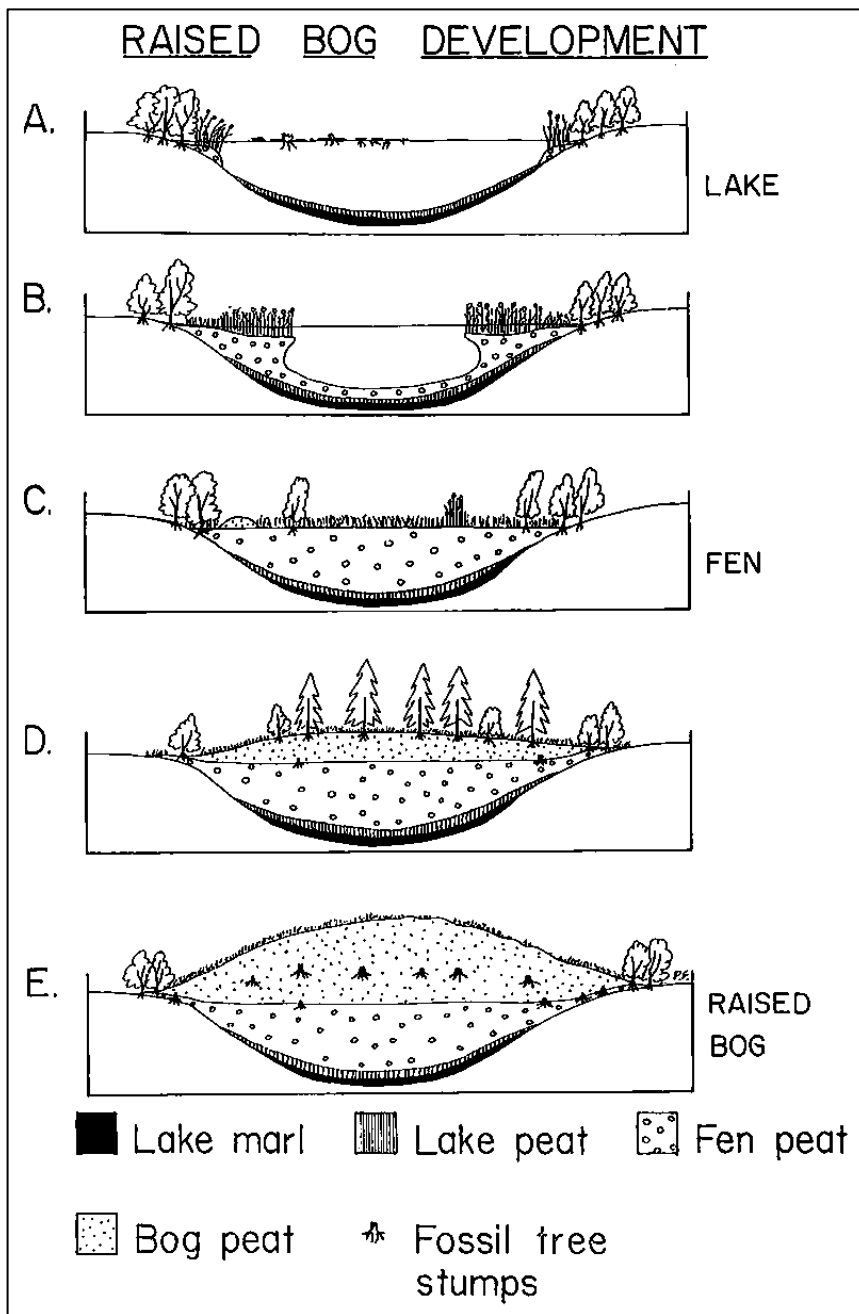


Figure 4.2 The formation of raised bogs (diagram from Cross, 1990a: 12).

A. Reed beds form around a lake.

B: These die in time. Their remains collect along with other debris and build up in the water. They decay slowly due to the waterlogged conditions. This material forms reed peat in time.

C: Eventually the lake fills in as peat accumulates in a process that Feehan et al. (2008: 161) call 'terrestrialisation'. A fen is formed. Plants, including sphagnum mosses, grow on the surface.

D: These die off and began to slowly accumulate as peat. As the bogs rises, its biochemistry is no longer influenced by ground water.

During the Neolithic, climate varied between wetter and drier periods (Stolz, et al., 2013). Trees grew in the early stages of Irish bog formation during drier conditions.

E: As the climate became wetter, the cycle of sphagnum growth and decay resumed. The bogs raised ever higher. Trees died off in these waterlogged conditions and fell into the bog. These are referred to as 'bog oak' when recovered, despite many of them being other species.

Irish raised bogs developed mostly in the midland Central Plain (see plates 4.1 and 4.2). This landscape is home to what is left of the peatlands which once formed the vast Bog of Allen network (Hammond, 1981). Bellamy (1986) described how these bogs grew from depressions in the topography and formed large 'cupolas' before spreading outwards and joining together. Bellamy called these 'ridge raised bogs' because of their navigation across the uneven underlying surface.



Plate 4.1 Central Plain, Co. Offaly An aerial photograph of the Central Plain, taken above Co. Offaly. To the left is the eastern side of Clara Bog SAC.



Plate 4.2 Central Plain, Co. Longford An aerial photograph of the Central Plain, taken from Co. Longford. Note the cutover bog to the left and the relatively intact section of bog in the centre foreground.

Raised bogs have many unique characteristics. They are physically differentiated from their blanket counterparts by the dominance of sphagnum mosses and distinctive dome-shaped morphology (Foss and O’Connell, 2017). This feature, also known as a ‘cupola’, is 90% water

and held in place by vegetation (Doyle and Ó'Críodáin, 2003). Bellamy (1986: 44) remarked, "The cupola of a raised bog is in effect a gigantic drop of water held together by a matrix of dead, partly decaying plant remains, held intact by a living skin of peat... As the dome grows in height and the slope increases, all sorts of tensions begin to develop in the peat, and cracks and tears may appear on the surface." Water can collect in depressions on the surface of a bog. Significant accumulations are called soaks (Bellamy, 1986). Water may spill out of a bog in a feature called a flush. There are higher nutrients found in and around these due to the concentration of the bog's water, which can lead to the development of species atypical of raised bog, such as woodland. The largest bog woodland in Ireland is found at All Saints Bog, Co. Offaly (see National Parks and Wildlife, 2016).

Small depressions in the surface of raised bogs are called hollows, while elevated vegetation concentrations are called hummocks. The heterogenous nature of raised bogs' outer layers supports the development of diverse plant communities and aids in carbon flux dynamics (Pouliot, Rochefort and Karofeld, 2012). Flatter areas of the bog dominated by a single plant species are called lawns. Around the edge of an intact raised bog is the lagg (see figure 4.3). This is normally influenced by ground water and is therefore fen-like in character (Feehan et al., 2008). These are extremely rare in Ireland due to human influence. Sheheree Bog SAC in Co. Kerry has a near-intact example (plate 4.3).

There are two Irish raised bog sub-types: true midland raised bogs and transitional mires (Moore, 1962 in Hammond, 1981). They are differentiated based on their geography, by the amount of precipitation they receive, and in turn the plant communities that develop. Rainfall is higher in the west than the east of the island of Ireland, which influenced the type of peatlands that formed (Hammond, 1981; Rohan, 1975 in Hammond, 1981: 25). Cranberry and Bog Rosemary are found in the true midland sub-type (Hammond, 1981). They emerged in areas which have rainfall of between 0.75m to 1m per annum (Feehan et al., 2008: 160). The second of Moore's subtypes are transitional mires. These incorporate the features and flora of raised and blanket bogs together in one location. They receive rainfall of between 1m and 1.25m per year (Feehan et al., 2008: 160) and are typically found in the western midlands. They are now more common than their true midland raised bog counterparts.

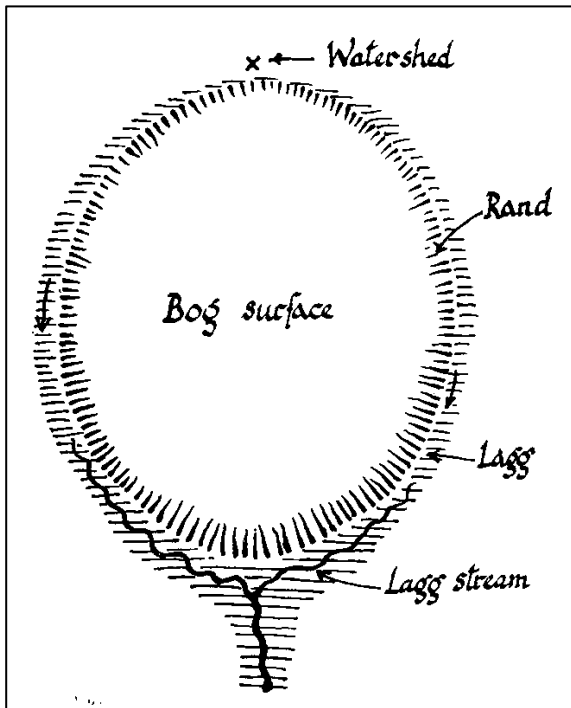


Figure 4.3 Key features of a raised bog A diagram of a raised bog's unique characteristics.. This peatland type is named after its dome-like morphology, also known as a 'cupola'. The rand is the side of the raised bog and the lagg its surrounds, which can have fen-like characteristics due to the influence of groundwater. As the bog rises, the water which once supplied the fen is cut off, and no longer influences its chemistry and in turn its ecology. Diagram: Godwin (1981 :7).

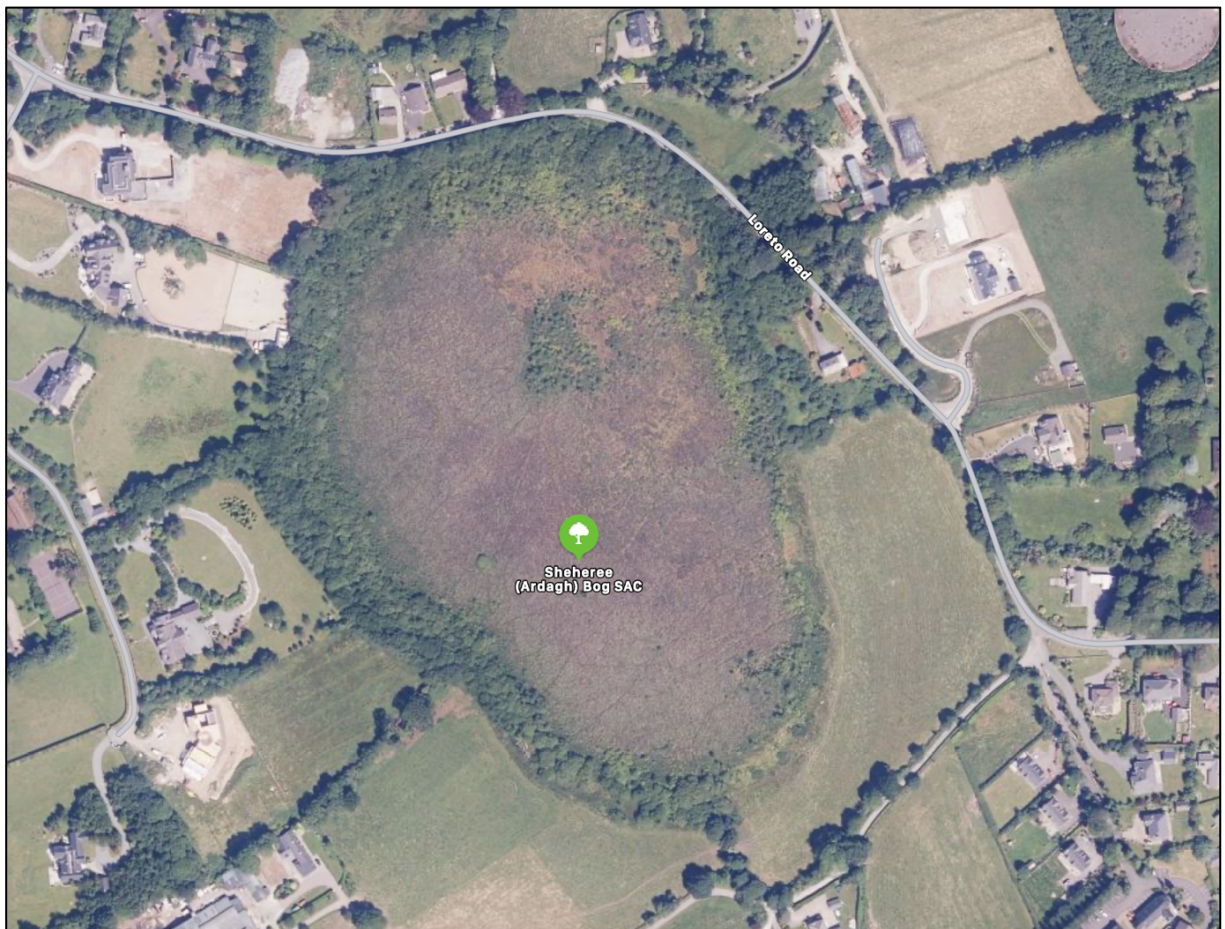


Plate 4.3 Sheheree Bog SAC, Killarney, Co. Kerry A satellite image of perhaps the most intact raised bog in Ireland. Note the presence of lagg around its perimeter and the bog woodland on its surface. The bog's near pristine condition is all the more remarkable given the extent of local development. Source: Apple Maps.

New typologies of Irish peatlands have since emerged as people laboured in and otherwise left their mark on these landscapes. Human modified peatlands are explored in the next section.

4.4 THE HUMAN GEOGRAPHY OF IRISH PEATLANDS

Wetlands are described by Mitsch and Gosselink (2015: 4) as the “kidneys of the landscape” as they receive, stabilise and cleanse inflows of water, benefitting people and creating habitat for wildlife. Humans have depended upon and utilised wetlands throughout history. Many lived in harmony with wetlands, including the Marsh Arabs in southern Iraq and the Camarguais in France’s Rhone River Delta (Mitsch and Gosselink, 2015). Today however, wetlands around the world are disappearing and those that remain are often threatened. Much of this loss is due to large-scale modification by people, including drainage, peat and sand extraction, and over-enrichment through pollution (Craft, 2016). 60% of European wetlands have disappeared (Silva, 2007). This has significant implications for both human life and biodiversity.

People have altered peatlands across the world (see Murray, 2018). From as early as 800 AD the Dutch began to drain their raised bogs (Van Dam, 2001). Large scale modification of the English fens occurred in the early seventeenth century, with the reclaimed land repurposed into agriculture (Rotherham, 2020). In 1697, Russia’s Peter I opened a peat-fired factory in the Vorenezh region (Sirin et al., 2017). In eastern Canada, peat has been extracted from bogs for over a century and utilised in the horticulture industry as a growing medium (Desrochers and Rochefort, 2021; Girard, Lavoie and Thériault, 2002). Many of Ireland’s fens have been converted into agricultural landscapes, polluted or had their peat extracted (Foss, 2007).

Ireland’s cultural relations with its bogs stretches back hundreds of years (Gladwin, 2016). McGrath (2013: 44) argued that “bogs mean different things to different people.” Reclamation for agriculture, cutting of turf¹ for domestic fuel were the primary forms of human/peatland interaction. New cultural landscapes emerged with bogs reproduced by human labour. However, Newbould (1989: 22) was critical of the ‘romanticisation’ of manual turf-cutting: “I doubt if the discipline of turfcutting (sic) by hand with a winged or a wingless slane (sic) will of itself survive much longer... And why should it? If turfcutting does survive it may be as a pleasant Sunday exercise for office-bound middle classes heading out from Dublin rather than as survival for impoverished and downtrodden peasantry.” Later, the bogs were utilised by BnM on an industrial scale to meet the energy needs of the state. This provided much needed

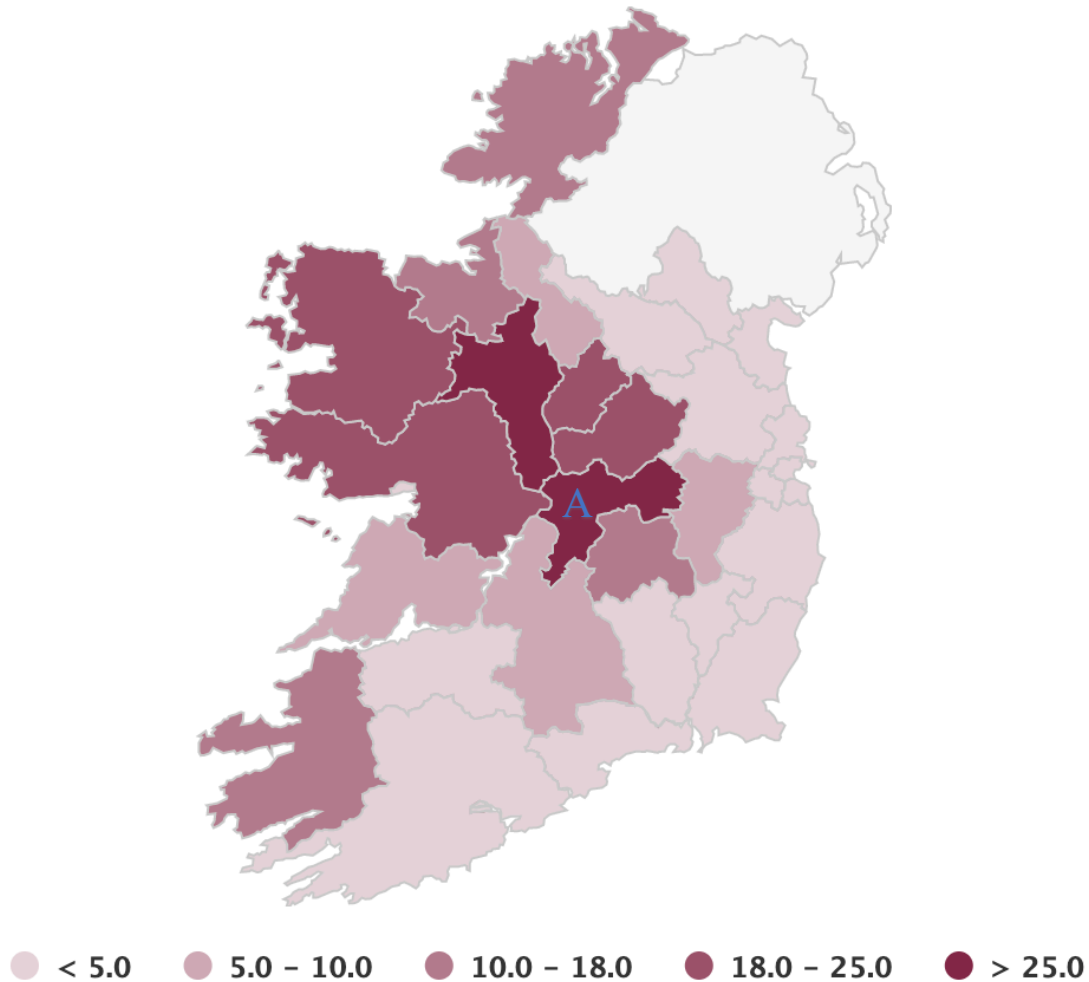
employment to midland communities. Domestic turf extraction was mechanised from the middle of twentieth century. Turf-cutters no longer extract the peat themselves, but instead employed a contractor to dig it out from their face bank using an excavator. The peat is then placed into a machine called a hopper, which mixes it, before it was extruded onto an area of cutover bog called a spread bank (see plate 4.4). Hoppers are either self-propelled or pulled by a tractor. The ‘saving’ process (turning and stacking sods for drying) continues to be done by hand.



Plate 4.4 Extruded turf, Co. Longford Turf spread out, ready to be footed. Peat is mechanically cut from a bog face bank by a contractor using an excavator. It is mixed in a hopper before it is extruded onto adjacent ground. It is then manually ‘footed’ by its owner so that it can dry out. Once the turf is ready it is transported home.

The use of turf as a domestic fuel varies across space. According to the 2016 Irish Census, just 5.3% of private homes used peat as their primary fuel for central heating (Central Statistics Office, 2016a). However, the midlands of Ireland remain heavily dependent on peat and turf (see map 4.1). 37.9% of Offaly homes utilise it as their primary source of home heating – the highest proportionate use in the state. It is also an important primary fuel source for

householders in counties Roscommon (26.6% use), Galway County (23%), Longford (20.8%), Laois (16.1%) and Westmeath (19.6%).



Map. 4.1 Irish homes heated with peat The percentage of private homes using peat-fired central heating systems by county. At 37.9%, Co. Offaly (A) has the highest usage rate in the country. Together, the Midland Region counties of Laois, Longford, Offaly and Westmeath have a use average of 23.6% - the highest in the state. Source: Central Statistics Office Ireland (2016a).

There have been efforts by the state to curtail peat extraction, given it is not sustainable on a human timescale due to the slow rate of accumulation. However, limited bog disturbance can result in the development of the Habitats Directive Annex 1 habitat ‘depressions on peat substrates of the *Rhynchosporion*’ (7150). According to the Interpretation Manual of European Union Habitats (2007), communities of *Rhynchospora alba*, *R. fusca*, *Drosera intermedia*, *D. rotundifolia* (plate 4.5) and *Lycopodiella inundata* can develop on naturally exposed (due to

frost or seepage) wet peat (or sand) in both blanket and raised bogs. Stallegger (2008: 6) found that this habitat is also produced by human activity within the bog, including manual turf-cutting.



Plate 4.5 Round-leaved Sundew, *Drosera rotundifolia*, photographed at a damp cutover area of Clara Bog SAC, is a plant characteristic of the Annex 1 habitat depressions on peat substrates of the *Rhynchosporion* (7150).

Bogs used for domestic turf-cutting (turbary) and those used for industrial extraction have different morphologies. The former are cut from the outside inwards, with a jagged, irregular edge to their exterior forming as each user places varying demands on the bog based on their personal fuel needs (see plate 4.6). Turbary plots were purchased, inherited or allocated. They are often associated with a house. The National Peatlands Strategy (National Parks and Wildlife Service, 2015) defines zones where ongoing small-scale peat extraction is taking place or where it has taken place previously as ‘cutover’.

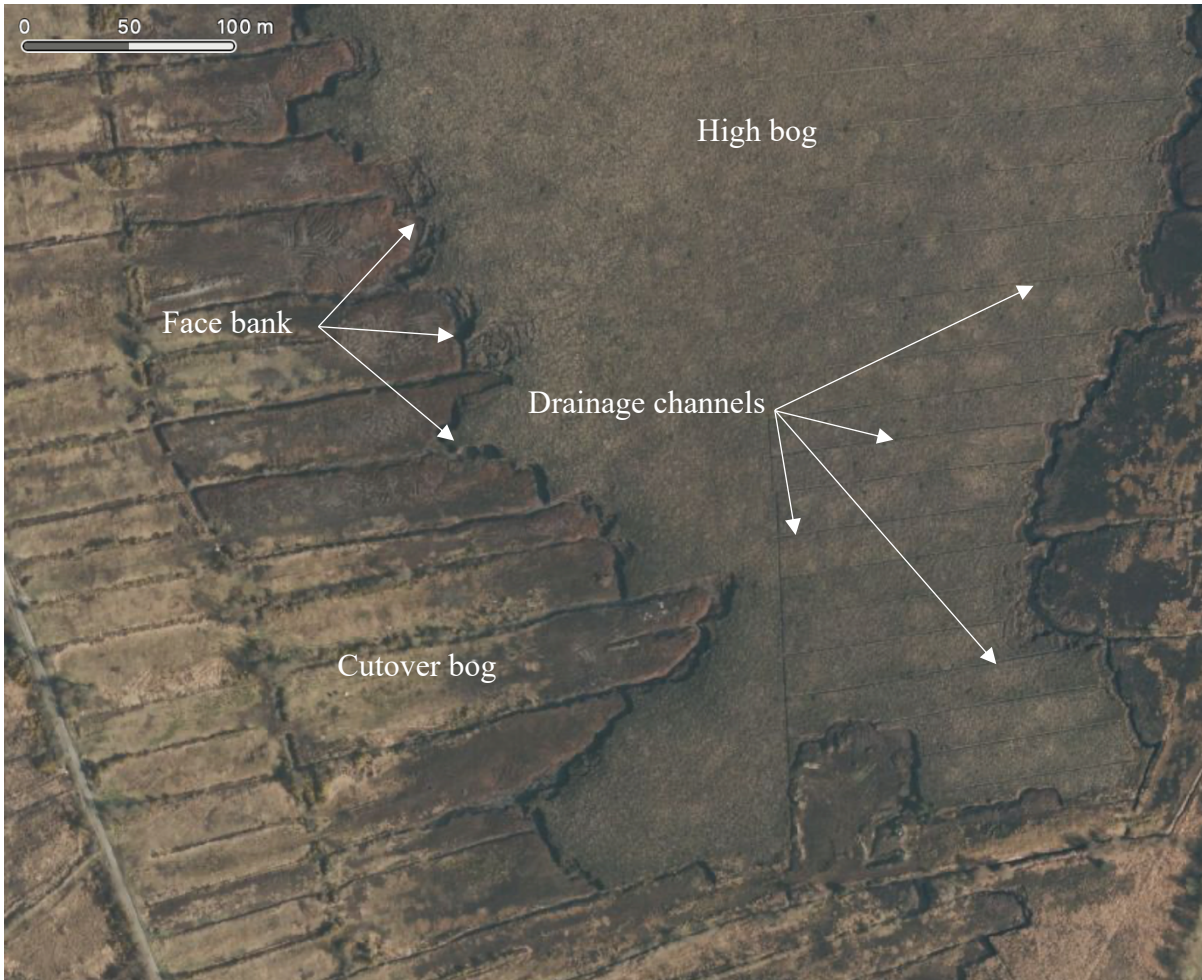


Plate 4.6 Turbarry bog, Co. Longford A satellite image of a turbarry bog near Corlea, Co. Longford. Note the series of plots to the left. Turf-cutters extract peat depending on their personal heating requirements, producing an irregular edge around the bog; the lagg and the rand depicted in figure 4.3 having long since disappeared. Source: Apple Maps.

Industrial bogs take a different shape. Drains were cut the length of the peatland so as to remove its water. Although generally considered of low conservation value, cutover raised bogs can contain a mosaic of valuable habitats including sphagnum areas and semi-natural bog woodland (Smith and Crowley, 2020). Milled industrial bogs were cut from the top downwards rather than from the outside in, there is no surface vegetation that can provide habitat for wildlife, leading them to be pejoratively described as ‘brown deserts’ (e.g. Häyrynen, Devery and Banerjee, 2021; plate 4.7).



Plate 4.7 A post-industrial Bord na Móna bog, Co. Longford This bog is part of the BnM Mountdillon group. The striation in the landscape are drains that were dug to remove water. With no vegetative cover present or food available, these spaces are unsuitable for animal life. Following rehabilitation, flora and fauna re-emerge.

4.5 TYPOLOGIES OF IRISH PEATLANDS

Industrial bogs which have been exploited to a point that it is no longer economically viable to continue extraction are called ‘cutaway bogs’ (Joosten, Tanneberger and Moen, 2017). While residual peat often remains in such circumstances, production on bogs with flat underlying topography can be almost completely cutaway. However, it is important to acknowledge variations in meaning when describing peatlands. Terms such as ‘cutover’ must be applied carefully as they can have different meanings depending on where they are used. In Canada for instance, cutover bogs are places which have been subjected to industrial extraction, or mining (e.g. González and Rochefort, 2014; Rochefort et al., 2003). The term ‘cutover’ is not present in the glossary of Joosten, Tanneberger and Moen’s (2017) *Mires and Peat of Europe* nor is it defined by Joosten and Clarke (2002). Moreover, some terms are value-laden. While the peat industry describes the ‘harvesting’ of bogs, environmental pressure groups characterise this as ‘mining’.

As this research is concerned with the Irish peat landscape, it utilises Irish terminology. Typologies identified in this chapter can be found at Table 4.1. These categories are not exhaustive. These are the headline descriptors of peatlands relevant to this study. Other

categorisations have also been developed (e.g. Renou-Wilson et al., 2022: 5). Peatland ecotopes produced by ecologists may differ. Fernandez et al. (2014, table 2.2: pp. 7 – 9) developed five ecotope typologies of raised bog physical characteristics; ‘central’ and ‘sub-central’ are active raised bog (ARB; 7110) that is soft and often quaking. ‘Marginal’ and ‘sub-marginal’ areas have lower water tables and tend to be firmer, while ‘face-bank’ is degraded and hard. New typologies continue to emerge. Crowley (2022) recently added ‘active raised bog on cutover’ (IWM128).

Table 4.1 Typologies of Irish peatlands

Type	Sub-type	Location
Blanket bog	Lowland blanket bog	Western coastal areas
	Upland blanket bog	West; Wicklow Mountains
Fen	Rich fen	Midlands
	Poor fen	Midlands
Raised bog	True midland raised bog	Eastern midlands
Hybrid peatlands	Intermediate fen (poor + rich)	Midlands
	Transitional mire (fen transitioning to raised bog)	Midlands
	Intermediate bog (raised + blanket)	Western midlands
Human-altered peatlands	Industrial (inc. cutaway) bog	Midlands, Co. Mayo
	Cutover bog	Midlands
	Drained raised bog	Midlands
	Eroding blanket bog	West coast; Wicklow Mountains
	Reclaimed peatlands	Across Ireland
	Rehabilitated bog	Midlands and Co. Mayo
	Restored bog	Midlands
	Afforested peatlands	Across Ireland

It is helpful to categorise Irish peatlands outside of ecologic efforts to restore and preserve them when considering these spaces from a human geography perspective. But caution is advised. A theme which emerges later in this study is that ‘all bogs are different’. It can be problematic and even erroneous to differentiate Irish peatlands in their ‘natural’ sense to their human-altered counterparts. Seemingly natural blanket bogs for instance spread out across a treeless landscape produced by Neolithic farmers some 5,000 years ago (McGrath, 2013). Given that all raised bogs have been altered by people to a greater or lesser extent, no completely natural examples remain. Yet these landscapes are still subject to non-human processes such as floral development, carbon sequestration (however limited) and methane emissions. They exist within nature and culture.

There are converging and occasionally erroneous classifications present in the peatland literature. Van Eck et al. (1984: 3) for example identified the misuse of the terms ‘transitional’ and ‘intermediate’ when describing peatlands. They state that ‘transitional’ should be used when describing a peatland developing from fen into raised bog. Drawing on the work by Schouten (1981, 1984), Van Eck et al. (1984) argued that intermediate should be used when describing a peatland with characteristics of both blanket and raised bog. As such, they argue that Hammond’s (1981) classification of ‘transitional sub-type’ to describe the hybrid blanket/raised bog peatlands of the western midlands is incorrect. Van Eck et al.’s (1984) argument is accepted in this study.

Linguistic meaning is not fixed. For ecologists, the term ‘bog’ refers to a specific functioning ecosystem, yet is used in lay discourse to describe both drained and intact peatlands in various states of human alteration. Confusingly, peat used in horticulture is described as both ‘peat moss’ (e.g. Clarke, 2010; National Parks and Wildlife Service, 2015) and ‘moss peat’ (O’Connor, 1989; BnM at figure 4.4). Further inconsistencies are encountered when examining fen nomenclature. According to Fossitt’s (2000) habitats guide, and repeated in Foss and O’Connell’s (2017), ‘transitional mires and quaking bogs’ feature characteristics of both rich and poor fen. These peatlands contain flora which is made up of a mix of bog, fen and open water species. However, the term ‘transitional mire’ describes a fen becoming a raised bog (Van Eck et al., 1984), and therefore should not be used to identify a rich/poor hybrid fen system. For the purposes of clarity, this study proposes the term ‘intermediate fen’ to describe these particular ecosystems.

Shamrock Irish Moss Peat



Shamrock Irish Moss Peat is produced from high quality Sphagnum Moss Peat. It is a completely natural product, free from any additives and is suitable for all plants. Thoroughly moisten before use, except when using on wet soil.

Ideal for use:

- Improving soil condition
- Improving soil structure
- Healthier plants and lawns
- Seed beds

Figure 4.4 Moss peat A website listing for Shamrock ‘moss peat’.

Despite their degradation from an ecological perspective, Ireland still retains internationally important raised bog habitat. Irish state-owned forestry company Coillte (N. D.b) estimated that Ireland holds over 50% of Europe’s remaining ‘oceanic raised bog’. Changing values impact on how these landscapes are managed. This is examined further in the next section.

4.6 INDUSTRIAL BOGS AND THE STATE

The Irish Free State was founded in 1922. The ESB was established by the government in 1927, initially to utilise the hydrological energy of the River Shannon (Manning and McDowell, 1984). In time it would become one of the largest customers of peat in the country.

The Turf Development Board was established in 1934 as a limited company (Andrews, 2001 [1982]) and later became Bord na Móna (BnM) in 1946. It produced peat briquettes in its own factories and sold these into the domestic fuels market. BnM also produced and sold machine-cut turf and later milled peat to the ESB, where they were burned in power stations to produce electricity. An extensive rail transport system were gradually developed to harness the potential of the bogs (see plate 4.8).



Plate 4.8 A Bord na Móna rake at ESB Lough Ree, Co. Longford A Bord na Móna locomotive, or ‘loco’, pulling wagons at the ESB Lough Ree power station, March 2020. A loco plus wagons (up to 16) is collectively known as a ‘rake’ (Clarke, 2010: 390).

The bogs had been used for their energetic resource long before the foundation of the Irish Free State. While it is difficult to precisely gauge the extent of human/peatland interactions of the distant past, it is evident that turf-cutting and land reclamation took place across the island (Feehan, et al., 2008). ‘Entrepreneurship’ in peatlands occurred for decades prior to the establishment of the Turf Development Board (Shier, 2018). Feehan et al. (2008) estimated that half of the Bog of Allen had been cutaway by the time BnM began its industrial operations there.

BnM is most strongly associated with peat production in Ireland and for that reason the focus of this study. It produced peat from some 80,000 ha of bogs. Through three development programmes enacted by a series of legislative mechanisms, the company would help power the nascent Irish state’s rapid economic development. It provided work to otherwise marginalised communities. Through their labour, Irish bogs would be reshaped (see figure 4.5). However, Bord na Móna’s history is not one of smooth, linear progress. An amusing anecdote in Clarke (2010: 86-7) sheds light on the challenges presented by land acquisition for example:

The hazards of acquisition were illustrated when two engineers, Callanan and Lee, the former large and the latter small, were on the farm of a landowner anxious to get as good a deal as possible. He said he did not want Bord na Móna on his land under any circumstances. He later sent word through a supervisor in the local works that he was oiling his shotgun and while he might miss the little fellow he was sure to hit the big man. An amicable settlement was reached with the landowner.

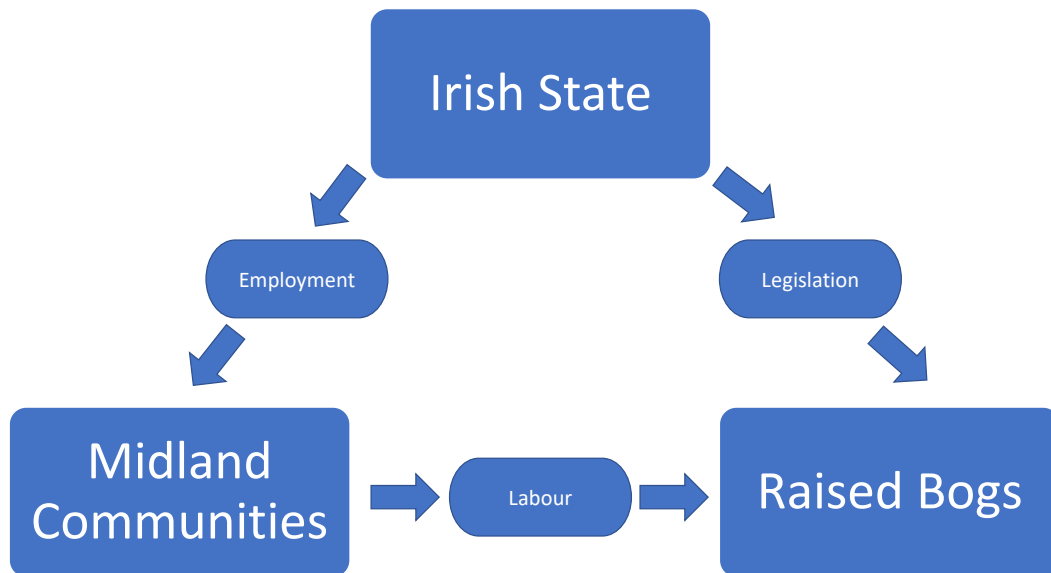


Figure 4.5 The state, the bogs and the people The Irish state employed workers from rural communities (mostly in the midlands) who would go on to produce the industrial bog landscape. This was enabled through a series of Turf Development Acts. As new value systems emerged, the state acted to protect some bogs (see Chapter Eight).

BnM used two extractive techniques to produce peat-for-energy. Turf was mechanically cut from bogs by large machines called ‘baggers’ by organised labour. In time, a process of milling peat from the bog surface would become the primary form of extraction. Both machine-won turf and milled peat were burned in ESB power stations to produce electricity. Turf was also sold on the private market and into the public sector local (Clarke, 2010) and milled peat was used to produce briquettes. Moreover, BnM produced moss peat from a number of bogs for the horticulture sector (e.g. Kilberry, Co. Kildare).

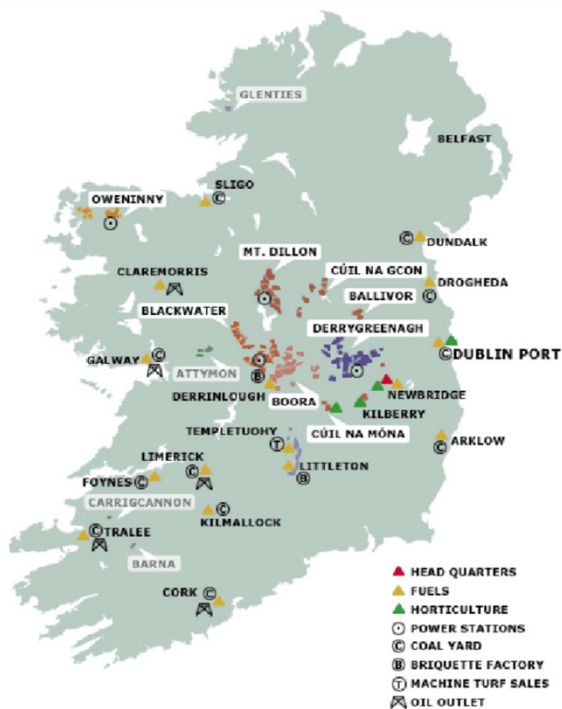
Production bogs were arranged in groups (also known as ‘works’ or complexes), with each supplying a plant, such as an electricity power station, briquette factory or a horticultural peat processing facility. Trains and lorries transported the commodity across what became a sizable

energy network. Most peatlands admitted were raised bogs. However, BnM made limited moves into the blanket bogs of the west, notably in Co. Mayo in 1951 (for an account see Loftus and Laffey, 2015). These activities were shaped through a series of Turf Development Acts. The company notably went through three development programmes (see table 4.2). Furthermore, the company went through a major transformation in the late-1980s following the appointment of Eddie O'Connor as managing director.

Table 4.2 The key developmental stages of Bord na Móna Source: Clarke (2010).

Development Programme	Year commenced	Legislation	Cost at time	Key aspects
1	1946	Turf Development Act 1946	IR£7 million	<ul style="list-style-type: none"> • BnM established as a statutory corporation • 24 bogs developed • 1 million tonnes of peat production • Kilberry moss peat plant built in Co. Kildare
2	1952	Turf Development Act 1950, Turf Development Act 1953	IR£14 million	<ul style="list-style-type: none"> • Emphasis on milled peat production over machine turf • 24 bogs to be developed or extended • Housing scheme commenced in 1951
3	1974	Turf Development Act 1975	IR£84.7 million	<ul style="list-style-type: none"> • Increase in milled peat production by 2 million tonnes • Expansion into smaller, less economically valuable bogs • BnM's borrowing capacity increased to IR£60 million

Clarke (2010) revealed some of the key challenges faced by the company. The Third Development of BnM proved to be a costly venture requiring state intention in the 1990s in order to stabilise the company’s finances. In short, BnM over-expanded in the 1970s and it would be outcompeted on price once the energy crises of the 1970s were alleviated. Moreover, BnM operated the private bog development scheme following the passing of the Turf Development Act 1981. This allowed third parties to apply for grants to develop bogs, further increasing competition in the marketplace.



Map 4.2 The spatial arrangement of Bord na Móna

In its heyday, BnM had works nationwide, although its activities were mostly concentrated in the midlands.

Source: Bord na Móna (N. D.a).

Amongst BnM’s most notable strategic assets outside of its bogs are its series of briquette factories (see table 4.3). Baled peat briquettes produced in four plants would arguably become the company’s most iconic brand. Clarke (2010) described plans for two factories which never materialised. The first was considered in the early 1960s and was to be located at Shannonbridge, Co. Offaly. It was never built. The second was planned in 1978 for Ballyforan, Co. Roscommon. It would utilise peat from the Derryfadda bog group. This factory never materialised and preparations alone cost BnM tens of millions of pounds. An illustration of the eventual extent of Bord na Móna’s Irish operations can be found at map 4.2.

Table 4.3 Bord na Móna briquette factories Source: Clarke, 2010.

Name	Location	Opened	Closed	Output p.a.	Notes
Lullymore	Co. Kildare	1936	1993	50,000t initially, 65,000t following 1972-3 extension	Developed by the Peat Fuel Company Ltd. Purchased by the TDB in 1939/1940
Derrinlough	Co. Offaly	1960	Operational. Set to close in 2024	144,000t	
Croghan	Co. Offaly	1961	2000	138,000t	
Littleton	Co. Tipperary	1982	2018	Approx. 130,000t*	*Kevin's (28) estimate

The ESB operated power stations which purchased and combusted BnM turf and milled peat. First generation plants (table 4.4) used mechanically-extracted turf, while second generation plants utilised milled peat (table 4.5). Third generation plants utilised milled peat with updated technology (table 4.6). The relations between both companies and subsequently between the ESB and the state were often strained (see Manning and McDowell, 1984, Chapter 7). BnM's first managing director Todd Andrews (2001: 205) acknowledged as 'reasonable' the difficult position the ESB had been placed in by the state:

Senior ESB engineers were... strongly opposed to using turf for the generation of electricity... They argued that the relative cost of turf to coal (oil at the time was not in the picture) would make the use of turf prohibitively expensive. They feared that under Irish weather conditions turf supplies would be unreliable. They believed that one large centralised power station located at Ringsend would have considerable cost advantages over a series of smaller stations spread around the country.

Table 4.4 First generation ESB turf-fired power stations Sources: Shier, 2018; McCowen and Culleton, 2005; ESB Archives (website).

Name	Location	Opened	Closed	Output	Notes
Portarlinton	Co. Laois	1950	1988	38 MW	Fuel sourced from Clonsast
Allenwood	Co. Kildare	1952	1993	40 MW	Fuel sourced from Timahoe
Lanesborough (Section A)	Co. Longford	1958	1982	20 MW	Associated with the Moundillon bog group

Table 4.5 Second generation ESB peat-fired power stations Sources: Shier, 2018; ESB Archives (website).

Name	Location	Opened	Closed	Output	Notes
Ferbane	Co. Offaly	1957	2003	90 MW	
Rhode	Co. Offaly	1960	2003	80 MW	
Bellacorick	Co. Mayo	1962	2005	40 MW	Utilised peat from Mayo blanket bogs
Shannonbridge	Co. Offaly	1964 (Unit 1 1965; Unit 2 1976; Unit 3 1982)	2003	125 MW (Unit 1 40 MW; Unit 2 40 MW; Unit 3 45 MW)	Associated with the Blackwater bog group
Lanesborough (Section B + C)	Co. Longford	1966 (B) 1983 (C)	2004 (B) 2003 (C)	40 MW (B) 45 MW (C)	Associated with the Moundillon bog group

Table 4.6. Third generation Bord na Móna and ESB peat-fired power stations Source: Shier, 2018; ESB Archives (website).

Name	Location	Opened	Closed	Output	Notes
Edenderry	Co. Offaly	2000	N/A	128 MW	BnM owned. Co-fuelled with biomass
Lough Ree	Co. Longford	2004	2020	100 MW	ESB owned. Replaced Lanesborough power station
West Offaly	Co. Offaly	2005	2020	150 MW	ESB owned. Replaced Shannonbridge power station

Note: In 1957, four identical, geographically dispersed, small-scale (5MW) turf-fired power stations were also built at Gweedore, Co. Donegal, Screeb, Co. Galway, Milltown Malbay, Co. Clare and Cahirciveen, Co. Kerry. They closed in 1995, 1989, 1990 and 2003 respectively.

Other state bodies have interests in Irish bogs. Coillte manages 232,500 ha of Irish peatland, mostly blanket bog, making it the largest owner of peatland in the country (National Parks and Wildlife Service, 2015: 31). It worked with BnM on afforesting its cutaway bogs and relations continue between both companies, notably in their co-ownership of Sliabh Bawn wind farm in Co. Roscommon. The NPWS has restored peatlands as part of the Living Bog project and has worked with BnM on these efforts. It has oversight of the transition of turbary bogs into Special Areas of Conservation. Coillte (N.D.b) has worked with the NPWS on its bog restoration efforts. Finally, the Environmental Protection Agency (EPA) regulates BnM's land use.

4.7 LEGISLATIVE MECHANISMS AND THE BOGS

Relations between state bodies and the bogs are produced through government legislation. This in turn is often derived from supranational institutions and international agreements. Four notable legal mechanisms pertinent to this study are examined next.

4.7.1 Integrated Pollution Control

The mechanism by which the EPA regulates BnM's activities is called the Integrated Pollution Control (IPC) licencing system. Companies across Ireland may be subject to this too. According to Clinch and Kerins (2002), such mechanisms arose following the identification in *Our Common Future* of inadequate environmental protection measures (Brundtland, 1987). In the Irish peat industry, an IPC licence is required for:

The extraction of peat In the course of business which involves an area exceeding 50 hectares (First Schedule to the EPA Act 1992 as amended: 1.4).

From 1999 onwards, BnM was required to successfully apply for licences in order to continue its operations (Clarke, 2010). An example of one such licence is for the extraction of peat from the Mountdillon bog group, Co. Longford (Licensee Registration no. 504, granted 9/5/2000). This permitted BnM, under the Environmental Protection Agency Act, 1992, Section 83(1), to extract peat "in the course of its business which involves an area exceeding 50 hectares." A number of conditions were attached to the granting of this licence, including the operation of an Environmental Management System (EMP):

2.2.2 The EMP shall as a minimum include the following objectives:

1. (i) Minimisation of suspended solids' movement to surface water systems via peatland surface water drainage channels during development and operation of boglands.

This required BnM to ensure dissolved peat would not enter into adjacent waterways. Silt ponds designed to collect run-off were used to prevent this from occurring. BnM was also be required to minimise dispersal of dust into the air (Condition 5.2 – 5.5).

One of the most important stipulations of the licence concerns after-use of the bog:

10.1 Following termination of use or involvement of all or part of the site in the licensed activity, the licensee shall:

10.1.1 Decommission, render safe or remove for disposal/recovery, any soil, subsoils, buildings, plant or equipment, or any waste, materials or substances or other matter contained therein or thereon, that may result in environmental pollution.

BnM would be required to produce a Cutaway Bog Rehabilitation Plan as part of Condition 10. The would shape its cutaway bogs following the end of peat production. Clinch and Kerins (2002) noted the high costs that operating with such a licence entails, including increased capital expenditure and higher operating costs associated with monitoring. BnM would later receive state funding to go beyond its licence requirements (see Chapter Eleven).

4.7.2 Public Service Obligation

In the mid-1990s a number of the ESB's power stations went out of commission. This put the future of large-scale peat-for-energy at risk. In 1999, BnM proposed the closure of aging power stations at Rhode, Ferbane and Shannonbridge in Co. Offaly, and at Lanesborough in Co. Longford. They would be replaced with two more efficient power stations, ESB West Offaly and ESB Lough Ree, built adjacent to the existing Shannonbridge and Lanesborough plants respectively (Clarke, 2010). The cost would be carried by the consumer through the Public Service Obligation (PSO) levy. This mechanism was designed to support both renewable and indigenous energy supplies which ordinarily would be uncompetitive in the open market (Commission for Regulation of Utilities, 2019). Such a policy, however well intentioned, had its drawbacks. Farrell and Lyons (2014) argued that putting such tariffs on electricity bills could lead to disproportionate burdens on low-income households.

The PSO was removed from the West Offaly and Lough Ree power stations at the end of 2019 (ESB, 2018). In their final full 'PSO year' of operating (Q4 2018 to Q3 2019 inclusive), the plants received a total of €87,750,000 in funding (Commission for Regulation of Utilities, 2019). The PSO was removed from peat-combustion at the co-fuelled BnM-owned Edenderry power station in December 2015 and replaced with REFIT 3 support (Commission for Energy Regulation, 2015). Through this, Bord na Móna (2019b) is eligible to claim financial support for burning biomass but not peat.

4.7.3 European Union Emissions Trading System

Launched in 2005 in response to commitments made in the Kyoto Protocol, the European Union Emissions Trading System (EU ETS) is a scheme designed to reduce greenhouse gas emissions from heavy industry (Skjærseth and Wettestad, 2009). The Environmental Protection Agency (N.D.a), who administer it in Ireland, explain that it is a 'cap and trade'

system where stakeholders are given an emissions allowance and have to purchase credits from organisations if they exceed their limit.

Despite low prices placed on carbon, Bayer and Aklin (2020) calculate that the EU ETS, which regulates around half of the EU's carbon emissions, prevented the release of 1.2 billion tonnes of the greenhouse gas between 2008 and 2016. Following their review of the EU ETS over its first ten years, Ellerman, Marcantonni and Zaklan (2016) expressed confidence that the reduction of the allocated 'cap' would continue to push emissions lower. Fears that the system may impact on companies' incomes and employment were alleviated when Dechezleprêtre, Nachtigall and Venmans (2018) found no statistically significant drop in profits or job numbers in participating firms between 2005 and 2012, despite an emissions reduction of 10% during that period. BnM Edenderry power station is subject to EU ETS.

4.7.4 The Habitats Directive

The European Union Habitats Directive (Council Directive 92/43/EEC) was adopted in 1992. The European Commission (N. D.) explained that it protects biodiversity and preserves valuable habitat. It had been negotiated for three years prior to its adoption in what was an arduous process (Jackson, 2020). It came into force in Ireland from 1997.

Habitats of conservation concern are listed in Annex I of the Directive. Formally protected sites are designated as 'Special Areas of Conservation' (SAC). Peatlands are part of Annex I under the designation 'Raised bogs and mires and fens (51.1 – 54.3). Clara Bog in Co. Offaly is an example of a protected peatland habitat. Since its designation, it has been referred to as Clara Bog SAC. The Habitats Directive along with Birds Directive (79/409/EEC; 2009/147/EC [amended]) form Natura 2000. However, the implementation of Special Areas of Conservation in Irish bogs would prove divisive, and disputes continue to the present day (see Chapter Nine).

This selection of legal mechanisms is not exhaustive. Other measures including the National Just Transition Fund and the Bord na Móna Bog Rehabilitation Scheme are examined later in this study.

4.8 CHANGING VALUES

For Huber (2018: 148), “It is clear that the question of value is at the centre of our global ecological crisis.” How societies value their material surroundings impacts on the forms that they eventually take. The bogs of Ireland have been valued and understood in a myriad of ways. However, these are not fixed in space and time, but subject to change. Gladwin (2016: 7) suggested that bogs were once considered ‘landscapes of fear’. Evidence of this can be found in the placement of offerings within them by prehistoric civilisations (Clarke, 2010). In the nineteenth century onwards Irish bogs were valued as a fuel resource given the low supply of indigenous timber (Newbould, 1989). In the present day, bogs are increasingly valued for their environmental services, including carbon storage, watershed management and provision of wildlife habitat (Renou-Wilson et al., 2011). However, not everyone will adopt the same vision. Peatlands are often contested spaces where extant value systems come into conflict (see Rotherham, 2020: 4 - 6 for a general overview). In their examination of value systems in the context of peatland management, Joosten and Clarke (2002: 45) identify three concepts:

1. Idealistic: Values are objective, independent of the real world and are known through intuition.
2. Naturalistic: Things in the world have value as they do physical characteristics.
3. Preference: Values are issued by an individual through their personal preferences. Value systems are not fixed, but subjective.

Value systems lead to questions about how people come to know and understand a given phenomenon. Foucault’s (1991 [1977]; Cresswell, 2013: 210) theory of discourse asks how humans come to know what they know, where this knowledge arrives from and who can communicate it. In short, it “considers the relations between meaning, power and truth (Cresswell, 2013: 211).” Three disparate understandings of the Irish bogs are examined next.

4.8.1 Wastelands

Peatlands have not always been looked upon favourably, with a prevailing narrative of ‘bogs as wasteland’ present throughout historical accounts (Häyrynen, Devery and Banerjee, 2021: 90). They have been subject to negative connotations including inertia, for example, ‘getting bogged down’. Viney (1987: 1) added: “Bogland to [many people] is a bleak wilderness, a brown monotony. Even country people who knew the bog well may find nothing especially

pleasing or beautiful about it. At best, they think, it is useful, providing fuel and feeding sheep, but almost anything built on it, or planted on it, would probably be an improvement.”

The first managing director of BnM, Todd Andrews (2001 [1982]: 114) wrote of his early encounters of turf cutting: “The word ‘bog’, or any phrase containing it, had become the symbol of poverty and backwardness. The ‘bog-trotter’ was the Irish archetype of ignorance and illiteracy.” He added, “The bog itself in the Irish mind was a symbol of barrenness.” Yet this vision was not fixed. Andrews himself acknowledged this: “There was another view of the significance of the bogs in the economic geography of Ireland. Scientists and others had looked on the great waste areas of our bogs as a valuable source of wealth if they could be properly utilized.”

Negative discourses around the bogs arguably enabled their integration into the industrial machine of BnM, and the afforestation of otherwise ‘useless’ blanket bogs by Coillte.

4.8.2 Socio-economic values

The dominant discourse surrounding bogs during the mid- to late-twentieth century was one of socio-economic development and subsistence by means of extraction, reclamation and afforestation (see Kearns, 1978, for a contemporary account). The bogs’ full economic value would be realised by Bord na Móna and the communities that surrounded them. Clarke (2010) outlined the socio-economic impact that BnM and the ESB had on people’s lives. Two of the accounts he collected (ibid: 102) are as follows:

Bord na Móna did some wonderful work. They made [Lanesborough] what it is today, a thriving town. Because only for them there would not be any power station. It was a poor town when I came here. It was a great boon to the people of the surrounding areas.

When I started in Bord na Móna I had no money. In three years I owned my own car. From the day I joined Bord na Móna in May 1955 to April 1996 I never wanted for money.

Between 1983 and 1984, BnM employment peaked at 7,171 (Clarke, 2010: 221). Significant decline in the workforce numbers occurred in the years thereafter. Between 1991 and 1992, 2,767 people worked in BnM (Clarke, 2010: 238). Job loss in BnM is discussed in Chapter Six.

4.8.3 Environmental values

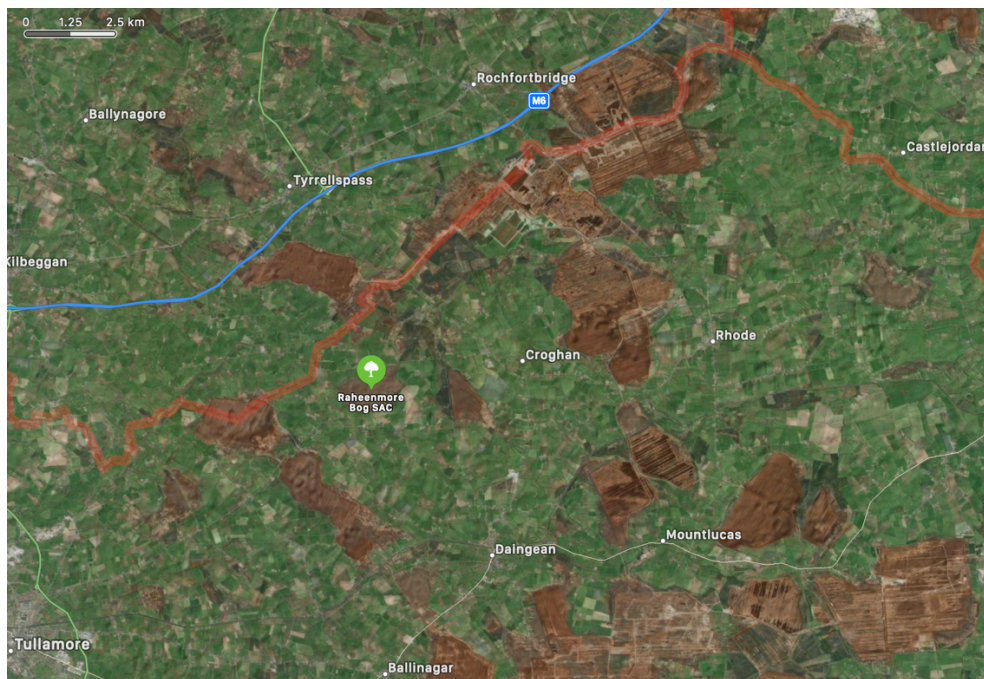
Speaking in Dáil Éireann, June 1991, Tom Enright, then Fine Gael TD for Laois-Offaly, said that “Briquettes and turf are indigenous, clean fuels.” He later reiterated his opinion by describing them as “environmentally-friendly fuel.” Such thinking is in stark contrast with contemporary values of peatlands. Yet what this demonstrates is that values change through time.

Alongside the prevailing ‘bogs as wastelands’ narrative and emerging economic values, ecological interest in peatlands began to arise in the 1930s (Praeger, 2014 [1937]). Notably, in 1976, BnM’s Thomas Barry (1976) argued that representative examples of Irish peatlands should be preserved for the benefit of future generations. Clarke (2010) noted that Barry’s advocacy led to the conservation of Pollardstown Fen and Raheenmore Bog – landscapes that today remain of high scientific value. Barry also found that bogs carried an “aesthetic and intellectual appeal” (1976: 19). Of this he wrote, “Their treelessness is of the essence of their beauty (ibid: 25).” To value the bogs in such a fashion was novel at the time. A decade later Viney (1987: 1) remarked, “The idea of wild landscape of any kind being valuable for itself, or especially beautiful, or an inspiration to poets and writers and artists, is a comparatively modern one.” Between Barry and Viney’s contributions a new way of knowing the bogs had taken root.

Dutch researcher Matthijs Schouten noted with concern the disappearance of bogs during research expeditions to Ireland in the 1970s. This coincided with BnM’s Third Development Programme. Efforts to preserve bogs led to tensions between those who espoused development and those who advocated for conservation (Van Eck et al., 1984). Unemployment was high throughout the country and preserving jobs became a national concern. Data collected by Treacy and O’Connell (2000) revealed that 62,100 men and 13,800 women were unemployed in Ireland in 1971; by 1987 that figure stood at 176,500 and 55,600 respectively.

The Ramsar Convention was signed in 1971. It came into force in 1975 and later in Ireland in 1985². It provided a framework for the conservation of, and ‘wise-use’ of wetlands. Both Pollardstown Fen (#474) and Raheenmore Bog (#417) were enrolled. Further conservation efforts were led by non-governmental organisations. The National Peatland Conservation Committee (later the Irish Peatland Conservation Council) was established in 1982 to advocate for the protection of Irish bogs and fens. The International Mire Conservation Group was

established in 1983 to advocate for the protection of peatlands on a worldwide scale. Although initially constituted as a network of bodies concerned with the development of wetlands, the International Peat Society would evolve to incorporate conservation values. This reflects the evolution of values concerning peatlands as time progressed. However, this was not an uncontested process.



Map 4.3 A raised bog landscape Conserved peatland Raheenmore Bog SAC (pinned) is the deepest raised bog in Ireland. It is 15m deep in places and sits within the larger Bog of Allen landscape, much of which is now cutaway. Source: Apple Maps.

Following a detailed survey for the state, Cross (1990a) concluded that a representative sample of Irish raised bogs be preserved in a Nature Reserve Network. Many of those identified later became Special Areas of Conservation, for example, Raheenmore Bog in east Co. Offaly (see map 4.3). But division remained, and economic development and conservation interests continued to be at odds. A key development arose when Joosten and Clarke (2002) endeavoured to synthesise economic utilisation and peatland conservation positions. They based their approach on the concept of ‘wise use’. Instead of the adoption and acceptance of single stakeholder priorities, wise use involves a broader range of interest groups in decision-making. Joosten and Clarke (2002: 19) presented a succinct definition of wise use in the context of mires and peatlands: “Those uses of mires and peatlands for which reasonable people now and in the future will not attribute blame.” They clarified that ‘use’ is employed in a broad context, and includes conservations and non-use.

Wise use was later built upon when a strategy for ‘responsible management’ was developed in 2010 for decision-makers (Clarke and Rieley, 2019). It has been subjected to five revisions since. Responsible management sought the implementation of the following vision: “Promoting Wise Use of peatlands through safeguarding their environmental, social and economic functions and respecting their local, regional and global values (ibid:13).” This model would be realised through the adoption of eight objectives, including climate stabilisation, management of water and the protection of biodiversity. It is included in Ireland’s National Peatlands Strategy (National Parks and Wildlife Service, 2015: 20): “A framework for the responsible use of Ireland’s peatlands will encourage appropriate uses and discourage inappropriate ones; what is appropriate and inappropriate will depend on context.”

4.8.4 Alternative values

Local people living in bog communities are slowly beginning to rethink their relations to the bogs they once cut (Häyrynen, Devery and Banerjee, 2012). Values are not fixed. While it is pertinent to prioritise management of high quality peatlands, degraded sites are also worthy of consideration. The cutaway bogs are valued in differing ways. Feehan et al. (2008: 484) identified some of the uses for these spaces: “Some will think the most profitable way to use it is to plant trees, others to lay it down to grass. In the view of others it is most valuable when used for recreation and amenity, or allowed to run wild in order to recover something of lost biodiversity.”

The raised bogs of Ardee, Co. Louth, were amongst the most eastern in Ireland (Mitchell and Tuite, 1995). Now cutaway, these peatlands remain valued by the local community. ‘Friends of Ardee Bog’ was established to protect them from further degradation. In Offaly, the BnM Boora bog cutaway landscape has been repurposed into the Lough Boora Discovery Park – a multi-award winning local amenity and tourist destination. In BnM’s Littleton bog group the traveling community graze their horses on the cutaway that has emerged. Similarly to their more intact counterparts, the visions for these landscapes can come into conflict with each other. The use of the cutaway more generally is discussed both historically and contemporaneously in later chapters.

While peatlands are now known and understood in multiple ways, a key value system gaining leverage since the beginning of the twenty-first century is carbon retention and sequestration. This is examined next.

4.9 CARBON EMERGES

In 1992, the United Nations Framework Convention on Climate Change was agreed in response to concerns surrounding global warming (United Nations, 1992). Further multilateral agreements and emissions reduction targets have been adopted by nation states in order to address the threat. The role of peatlands in mitigating climate change was acknowledged by Joosten and Clarke (2002) in the early 2000s.

Contemporary debates surrounding peatlands are now dominated by biodiversity preservation and climate mitigation (e.g. Wichtmann, Schröder and Joosten, 2016; Bonn et al., 2016; Craft, 2016). Bogs provide habitat to rare plants and animals. Their alteration threatens them. A notable example is Rannoch-rush (*Schauchzeria palustris*). Bellamy (1986) described how these plants existed in just one place in Ireland – Pollagh bog, Co. Offaly. They disappeared when it was drained and worked over by BnM. Irish raised bogs once provided abundant habitat to species like curlew (*Numenius arquata*) and Irish red grouse (*Lagopus lagopus hibernicus*). Their populations have sharply declined as these landscapes were industrially exploited. Moreover, peatlands in their natural waterlogged state also sequester and store carbon. This is explored next.

4.9.1 Peatlands as carbon stores

Peatlands and carbon are now widely associated with each other. Draining bogs and combusting their peat releases carbon dioxide into the atmosphere. Furthermore, water extruded from bogs contains dissolved organic carbon (DOC). Much of this is released into the atmosphere downstream of the bog it originates from. Retention of water in peatlands is necessary if they are to retain their carbon (Renou-Wilson et al., 2011). A commonly used factoid (e.g. Rotherham, 2020: 12, 16; Nally, 2022; Wilson, 2021) utilised when peatlands are discussed is:

Covering just 3% of the world's surface, peatlands hold twice as much carbon as the world's standing forests.

A 2017 article by Hance (2017) published in both in *The Guardian* and *Ensisia* may have contributed to its dissemination. While it is useful for demonstrating the value of peatlands as carbon stores, it does not indicate how much carbon is stored. A review by Yu (2012) estimated that the total amount of carbon in northern peatlands is 500 ± 100 gigatons, although they

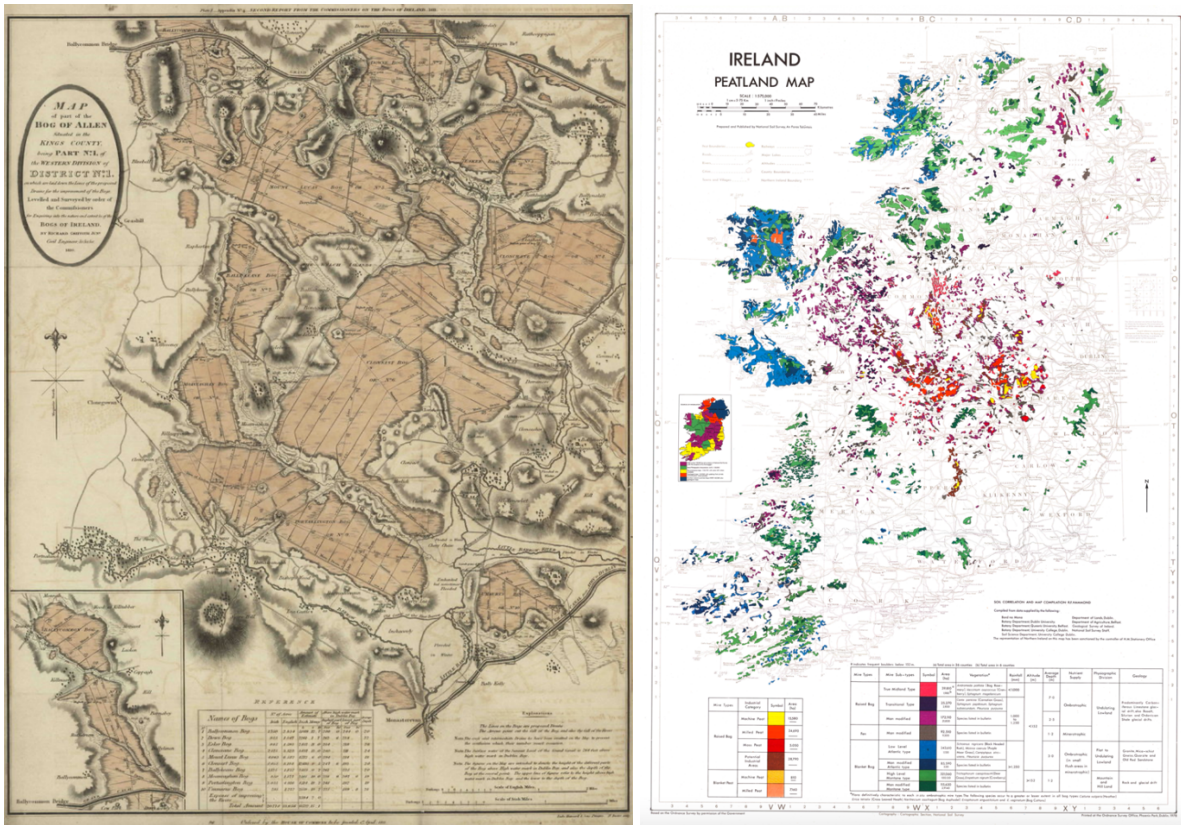
acknowledged that there remains uncertainty regarding its true extent. Page, Reiley and Banks (2011) estimate that tropical peatlands hold between 81.7 – 91.9 gigatons, with 77% of this in Southeast Asia alone.

Pan et al. (2011) found a high level of uncertainty surrounding the extent of net carbon sequestration in the world's forests. They estimated that woodlands hold 861 ± 66 gigatons of carbon. 44% of this is held in the top 1m of soil, with 42% (363 ± 28 gigatons) held in biomass. Using the upper estimate for peatlands and the lower estimate for forestry biomass leads to the conclusion that peatlands hold twice as much carbon as standing forests. Whilst an attractive and easy to grasp concept, it should be considered apocryphal given the level of uncertainty involved.

To begin to accurately gauge the extent of carbon stored in peatlands it is necessary to accurately map them. In the next section, the efforts to accurately gauge Irish peatland carbon stores are evaluated. This begins with an examination of the extent of its peatlands.

4.9.2 The spatial extent of Irish peatlands

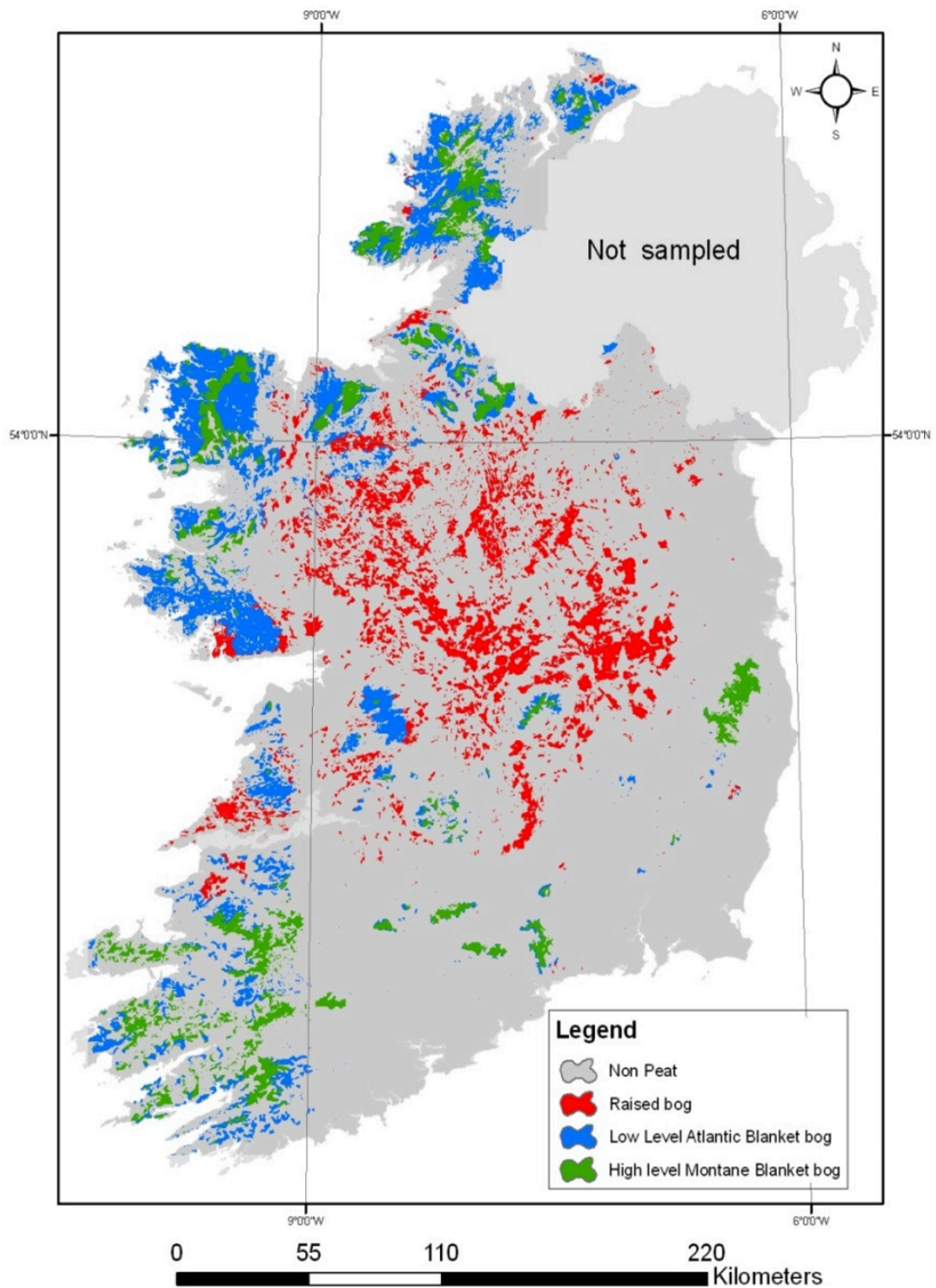
The first Irish peatland maps were produced by the Bogs Commissioners (map 4.4). They operated between 1809 to 1813 following their appointment by the British government to survey the bogs of Ireland for possible development (Horner, 2019). In 1978, Hammond's Peatland Map was published by the National Soil Survey (map 4.5). Hammond (1981: 1) estimated that 16.2% of the island of Ireland's terrestrial surface was peatland. In the Republic of Ireland alone, that figure was 17.2% (ibid). The Irish National Peatlands Strategy (National Parks and Wildlife Service, 2015: 19) revised this figure and said that 21% of the Republic of Ireland's surface was peatland. This is based on Connolly and Holden's (2009) Derived Irish Peatland Map (Version 2), which revealed that 20.6% of Irish soil, or 1,466,469 hectares, was comprised of peat (map 4.6). However, there remains uncertainty as to the true extent of Irish peatlands. In a report prepared for Monaghan County Council, Foss and Crushell (2010) created a map and database of its wetlands. They acknowledged the probable existence of more in the north and east of the county (ibid: 8).



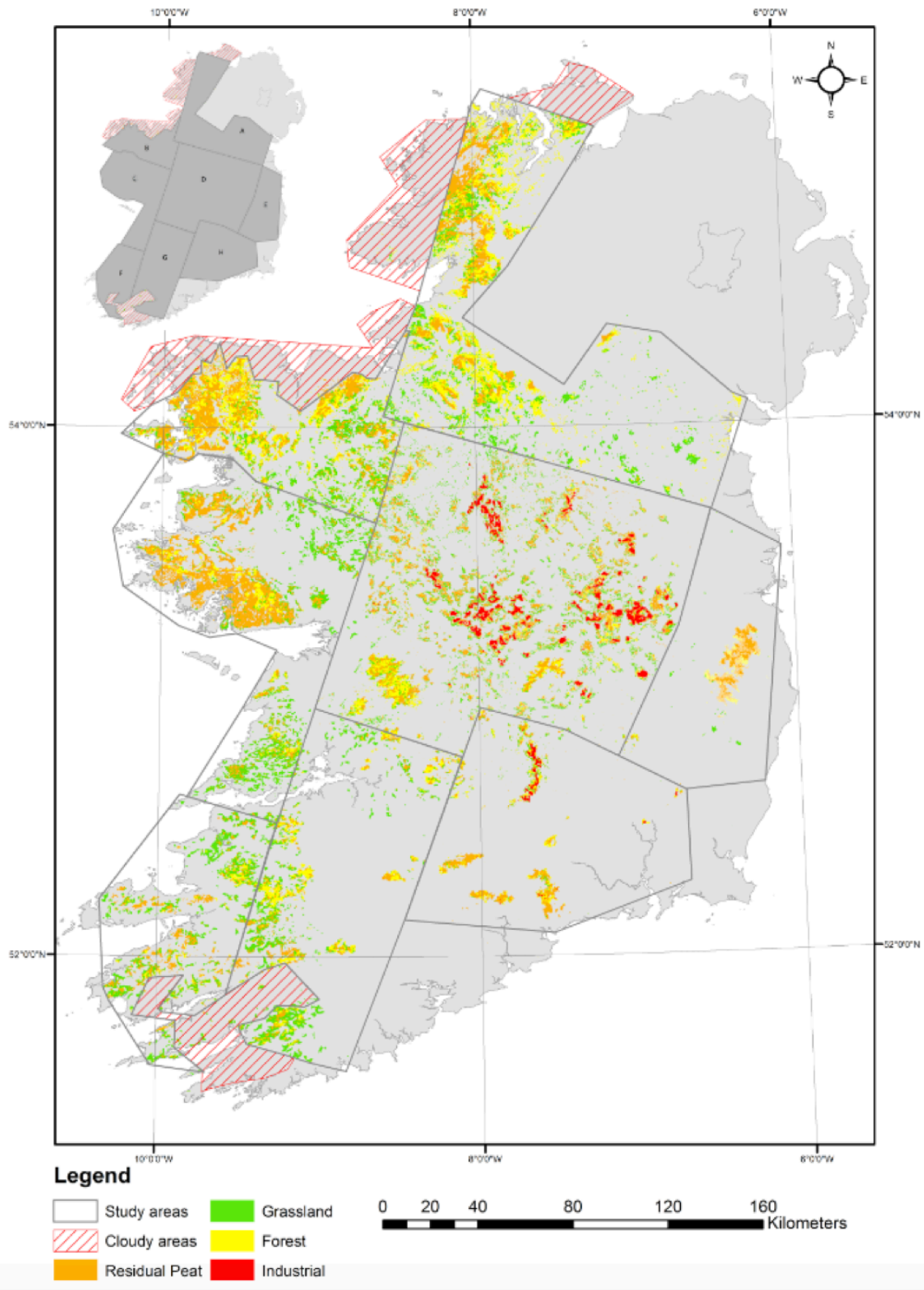
Map 4.4 Bogs Commissioners map of Clonsast bogs and their surrounds (left) This group was amongst the first to be opened by the Turf Development Board. Source: Bord na Móna Living History (N. D.).

Map 4.5 Hammond’s 1978 peatland map of Ireland (right) Source: National Parks and Wildlife Service, 2015.

In 2018, Connolly developed a new map which outlined the use of Irish peatlands (map 4.7). He discovered that 66% of Irish peatlands had undergone land-use change: 35% to grassland, 27% to forestry, and 4% to industrial production (Connolly, 2018). However, the research has weaknesses. Its accuracy rating is 77%. Efforts were compromised by persistent cloud cover over the western coasts. Moreover, the satellite data used is from 2005 to 2006. Connolly’s (2018) mapping of the midland raised bogs (which excludes midlands upland bogs) nevertheless provides useful data. He found that 34% of these were in a residual or degraded status, 15% were under forestry, 39% had been converted to grassland and 11% were industrial landscapes. These findings suggest that BnM has had less impact in relative terms eroding the midland bogs than may be commonly perceived. This is supported by Feehan et al. (2008) who theorised that half of the Bog of Allen, a peatland complex that once stretched across the centre of Ireland, had disappeared by the time BnM began extracting from it. This suggests that land reclamation and domestic turf-cutting have had significant impacts on midland raised bogs.



Map 4.6 Derived Irish peat map (V2) produced by Connolly and Holden (2009). This is the most accurate map of Irish bogland currently available (Connolly, pers. comms.).



Map 4.7 Irish peatlands and their uses by Connolly (2018). Note the cloudy areas which impacted the accuracy of the findings.

4.9.3 Calculating Ireland's peatland carbon stock

Mapping peat soils in Ireland is an essential component in gauging their store of carbon (Connolly and Holden, 2009). However, estimating the stock of carbon in peatlands is difficult due to a lack of data (Byrne et al., 2018). Indeed such endeavours are characterised by uncertainty. In his review of research of carbon estimates in British bogs, Lindsay (2010) outlined the difficulties in producing an accurate figure. His work describes 'standard cubic metres of peat' but as is illustrated later in the present study, bogs exhibit considerable variability across space. Carbon density of peat soils, in particular, remains an uncertainty (Renou-Wilson et al., 2022).

Important contributions to Irish carbon estimations have come from Tomlinson (2005) and Holden and Connolly (2011). Tomlinson estimated that Irish soils collectively held 2,048 megatons (Mt) of carbon in 1990 and 2,021Mt in 2000, with 53% of this stored in peatland. However, Tomlinson noted the uncertainty surrounding data used to calculate these figures. Lindsay (2010: 76) went as far as to describe Tomlinson's contribution as an 'exemplary study of uncertainty'. Holden and Connolly (2011) also note the uncertainty that surrounds the quantity of soil organic carbon (SOC) stored within Irish peatlands. They deemed it necessary to calculate peat depth, its area and its density. In response, they developed a peat depth model and employed it to gauge the extent of the carbon stored in the blanket bogs of the Wicklow mountains. Applying this approach to all blanket bogs in Ireland, Renou-Wilson et al. (2011) found these landscapes hold 1,073 Mt of carbon. To calculate the total for all peatlands in Ireland Renou-Wilson et al. (2011) added this figure to Tomlinson's (2005: 85) 'basin peat' (i.e. from raised bogs) figure of 493,354,368t of carbon. They concluded that there was 1,566 Mt of carbon in Irish peatlands. This means that >75% of terrestrial soil carbon in Ireland is stored in these landscapes (Renou-Wilson et al., 2011: 52; Byrne et al., 2018: 250). However, this data is not exhaustive. Renou-Wilson (pers. comms. 1/3/2022) confirmed that fen peat was not included in these calculations. She stated that their carbon stocks would be low given their shallower depths, before adding that fens converted to agriculture would likely have lost considerable stores of carbon. The extent of soil carbon has since been revised. In their latest calculations, Renou-Wilson, et al. (2022) found that Irish peatlands hold 2,216 Mt of carbon.

4.10 CONCLUSION

This chapter outlined geographic aspects of Irish peatlands, including their physical characteristics and human use before a range of typologies were produced. It outlined how state institutions such as BnM, the NPWS, EPA and Coillte have oversight of these valuable landscapes. Legislation shapes how people interact with these spaces. Four notable legal mechanisms were discussed.

How people come to understand peatlands varies and is subject to change through time. Once considered as wastes, bogs were integrated into an energy network that powered homes and provided employment. Today, new visions for these landscapes have merged, including wildlife habitat, amenity and tourism, and carbon stores. However, value systems sometimes differ, leading to conflict on the bogs.

Footnotes

¹ Turf and peat are the same material. Peat in ‘sod’ form is referred to as ‘turf’, whereas ‘peat’ is ordinarily used to describe the substance in ‘milled’ form.

² For a list see: https://rsis.ramsar.org/sites/default/files/rsiswp_search/exports/Ramsar-Sites-annotated-summary-Ireland.pdf?1645112777

PART II: FINDINGS

CHAPTER FIVE:

LIVELIHOODS AND THE IRISH PEAT INDUSTRY

5.1 INTRODUCTION

Contemporary discourse around peat production reveals a sector in crisis as its closure arrived much faster than originally anticipated. However, the findings in this study indicate that the sector has been slowly closing over several decades.

This chapter examines the interrelations between workers, communities, and the Irish peat industry. In so doing, it speaks to the following research question:

What are the socio-economic implications for peat workers and midland communities once industrial bogs close?

This chapter demonstrates how BnM has existed in a state of instability, both expanding and contracting throughout its history. This has social and economic consequences for peat workers and surrounding communities. It begins by examining the relations workers of the past had with BnM through time, before exploring the indirect connections between communities and the wider peat industry.

5.2 THE GOOD LIFE

Two senior figures from BnM's past described the company in a broad sense. Former board member Jason (10) remarked: "It's a very unusual company. It has a very strong sense of social purpose, always has." He continued, "I found them to be very *wholesome* [emphasis].... They're very proud of what they do, they're very proud of the machinery, proud of making stuff, proud of supporting their local community... And it's a very big identifier in those parts of the country. So it gives people *standing* [emphasis] that you're part of Bord na Móna – part of something bigger than yourself." Oscar (17), former company secretary, imparted his perspective on its unique characteristics:

As a place of work it was a very positive working environment. It was a very pleasant place to work. They had some kind of DNA in the company that I noticed, that, if a person was incompetent, or if a person wasn't a pleasant person to work with, somehow or other, by some process that I never understood, those people did not last in the company. So it was a place where you had to be competent, and you had to be easy to work with... I thought it was a lovely place to work.

The following testimony from BnM employees past and present highlights the positive relations they had with the company through time. This is important to understand when considering what is to be lost as the peat sector closes.

Finbarr (24) left school aged 17 with no Leaving Certificate. He recalled starting his working life in the agricultural sector and described the challenging conditions. He then said, "When I came to Bord na Móna... it was a totally different set-up... 'cause you had your canteen, you got all your gear... your boots, everything." He added, "You're clocked in at 8 o' clock, you go home at 8 o' clock, you're paid for every hour you [work]... If anyone is telling you any different they're telling lies... *The money and conditions like* [tone up]... You wouldn't get it anywhere – with my education, I'm saying."

In 1977, Steve (A) recalled joining BnM at the Littleton group of bogs, Co. Tipperary: "I started off as a labourer with a shovel and a fork digging drains and letting off water. That was your job. You saw water, you let it go. At all cost, you had to keep the top of the bog dry so that machinery could travel on it." In time, Steve would drive an excavator before he was promoted to supervisor, where he oversaw the labour of forty men for almost ten years. I asked Steve what he enjoyed about his work. He responded eagerly: "Oh Bord na Móna was a great job.... Great job.... The wages were good. We were out in the open air." I later asked Steve about the circumstances surrounding his departure from the company. He described it as a "fiasco" in a disheartened tone. He recounted that BnM had been looking for redundancies in the early 1990s, and there was need for a supervisor to leave. He applied with some reluctance. I sensed from his tone that he might still regret his decision to leave.

The theme of *family* emerged throughout many of the interviews. Bob (2) worked in BnM for 44 years. He began as a labourer, before becoming a surveyor, and eventually a supervisor. He said of BnM: "I think it was a great company to work for. I'm delighted I worked for it. They

educated my family... they paid my mortgage.” Hillary (25.2), a retired Co. Offaly shopkeeper, recalled how her father had worked his way up in BnM to become a manager. She spoke of the impact the company had on her upbringing: “For us... we had [a] big family, one wage. Bord na Móna provided that wage.” She continued, “First television, first car, first holidays. It was his salary that provided all that.” At the time of interview, Barry (22) had been employed by BnM as a landscape planner for over 40 years. He said, “I feel proud to have worked for it... [The] company’s always treated me well... I’ve managed to rear my family... At this stage my kids are all educated.... So, my emotions towards Bord na Móna are very strong because it has provided me with a great quality of life and sustainable income.” Henry’s (26) father worked in BnM and encouraged his son to join. Henry started in BnM aged 16 and now works in the Derrinlough briquette factory in Co. Offaly. I asked him what he valued about his job. He emphasised the necessity to work in order to support his family, pay his mortgage and to put a “bit of grub on the table.” He added: “It means a lot, so it does. That’s how I bought my house. It means an awful lot – to my wife and family... If you lose your job, that’s it.... You could end up losing your house, losing everything.” Ian (5) also had familial connections to the company: “My father worked in Bord na Móna, so I was reared in Bord na Móna. As a youngster, I shouldn’t have been out on the bogs, but my father used to bring me out.” I asked what age he was. He responded, “I would have been aware of Bord na Móna at maybe nine, ten years of age.” Now middle-aged, BnM has been a significant part of Ian’s life. Others have had similar experiences. Hugo (27) worked in BnM in various roles for 41 years. He was subsequently re-employed on contract for two years rehabilitating the bogs from which he had once extracted peat. His story echoed the others: “I started here when I think I was 19. It reared my kids, it bought me a house... It educated my kids, it kept my family going... I made a good living out of it, a good life.”

The association between BnM and *life* itself was also apparent in many of the interviews. Donal (1) worked in BnM communications when I interviewed him. He said he had been employed for in the company for 43 years in a professional capacity, but had worked in a seasonal role for over a decade as a youth. He said, “It’s been a significant part of my life... more than significant – it’s been all my working life. I’ve had several different careers in the company.... I could go back and say to you ‘I’ve worked for ten different companies’ because... I’ve had an incredible variety of challenges.” Gary (8) lives in Kilcormac, Co. Offaly. After serving his time¹ as a fitter²/turner³ at an engineering business in Tullamore, Gary began work at BnM in 1968. He was employed there for 44 years, before retiring in 2012. He said, “I came into Bord

na M6na and sure, I spent my whole life there, I spent my whole life there.” He continued: “It was a friendly atmosphere. There was no hierarchy, there was no... everybody just went to do their job. The atmosphere was very good... I could definitely say there wasn’t one day I didn’t like going to work. That’s a huge thing to be able to say after that length of time.” Gary elaborated:

The atmosphere.... The craic⁴ was there [laughs]. You’d characters from all over the place... There was something new every day. But the work was done. It was done in a jovial manner, I’d say. And there was some hard work, people worked hard because there was targets to be met, weather permitting – the weather was everything in Bord na M6na. It was like a farmer with the hay, you had to work in the fine weather.

I interviewed Ed (4), Gary’s former colleague. He started in BnM in 1975 and worked for 43 years in administration. I asked Ed what BnM means to him. He responded in a similar fashion to Gary: “Ah sure, Bord na M6na’s really been my life.” The company not only employed Ed, but indirectly supported his family as he grew up. He recalled how at the time of his birth in 1953, his parents opened a shop adjacent to St. Cormac’s Park, a then new BnM housing development for its workers (plate 5.1). Many customers were BnM employees and their families. This example illustrates the indirect impact BnM’s activities had on communities. Alan (3) corroborated this. He worked in BnM from the late-1970s until the late-1980s. Alan recalled how BnM provided both full-time and part-time/ seasonal work, with good pay. He stated that the flexible working arrangements offered by the company supplemented local farmers’ incomes. Kiernan (2019) reported that 300 workers, their families and other community members marched on July 22nd 2019 in a protest against temporary lay-offs in the bogs that supplied the ESB Lough Ree power station, following the plant’s closure for breaching environmental regulations. Seasonal worker and farmer, Basil Mitchell, was quoted: “I’d say if it wasn’t for Bord na M6na I wouldn’t be farming at all because it’s not able to stand on its own two feet at all these days.” Alan concluded, “I think the midlands, and certainly parts of Offaly, wouldn’t be what they are today if Bord na M6na didn’t exist.”



Plate 5.1 St. Cormac’s Park, Kilmacmac, Co. Offaly A row of Bord na Móna-built houses. This estate and seven others were constructed across the midlands during the 1950s (Clarke, 2010).

Collegiality and friendship was another emerging theme in BnM workers’ testimony. Frank (6) remarked: “I found what really benefitted me was coming into a company like Bord na Móna and the support that I got from... a whole range of other colleagues, in terms of working as a team, working together. Previously, I would have worked as a consultant ecologist, and you were working on your own.” Henry (26) works shifts around the clock in the Derrinlough briquette factory. He explained the difficulty of such working arrangements is alleviated by friendship: “You go in and you have your laugh... I go in my place now... I’ll see nobody. But you’ve phones there, and you’d be ringing one another and having... a chat and acting the bollocks [laughs].” I asked if he enjoyed that. “Ah you would, you’d have to have the laugh and the craic, sure. If you don’t have that you’ve nothing.” Gordon (19) also recounted the positive relationships he had with other workers: “I have some great friends in Bord na Móna... And Bord na Móna is... like a big family... everyone helps each other. It makes a shocking difference because... sometimes [the] work can be rough and rugged and... there’s a lot of pulling and dragging and lifting. When you have friends like that they’ll come along and [say] ‘We’ll do that together, that’s not for one man on his own’.” Gordon further described the value of friendship in BnM: “When you go for your break and you have eight or ten guys sitting in for a mug of tea, it’s unbelievable. It’s the slagging⁵ and the banter that goes on, you know? It makes the day and it shortens the day.”

Finbarr (24) said his job had drawbacks. Similar to Henry (26) at the Derrinlough briquette factory, Finbarr worked ‘shifts’, or set hours around the clock, at Littleton briquette factory. This meant that his social and family life were sometimes affected. He said, “My wife would say, ‘We might go away this weekend?’ I says, ‘I can’t, sure, I’m working.’ Financially you couldn’t afford to take off a Sunday like, because the money for Sunday was colossal.” Hugo (27) also described the long hours he worked milling peat. He often worked a double shift,

starting at 14.00 and not finishing until 06.00 the following morning. He alluded to this having an impact on his family life, but concluded, “In [the] whole, BnM was good to me – I couldn’t criticise it.” Finbarr agreed: “It means I have a house, and I had a good standard of living and still have a good standard of living... I got [a] good wage out of it, good conditions.” Referring to his eventual redundancy payment after the factory closed, he said, “I got a good whack of money that I’d never [be able to save up].”

This section illustrated the importance that BnM had on people’s lives. Themes of ‘family’ and ‘life’ continued to emerge from the workers’ testimony. Moreover, employees value the social aspects of work, including good humour and cooperation. Socio-economic relations to the peat industry extended beyond those directly employed and their families. Many communities grew around the sector and became dependent on the industry. This is explored in the next section.

5.3 SMALL BUSINESS AND THE BOGS

The socio-economic benefits that the peat industry brought to the lives of workers extended beyond them and into local communities. In particular, small businesses developed to serve the needs of peat workers and their families. In this section, these relations are examined.

Gabriel (25.1) and Hillary (25.2) are a married couple who once ran a small grocery business in Walsh Island (Walshisland), in east Co. Offaly. Their business was closely connected to the fortunes of the nearby Clonsast bog group, an industrial peatland that once fed turf into the now demolished ESB Portarlington power station in Co. Laois. First surveyed in 1936, Clonsast was the first bog group opened by the Turf Development Board (TDB) for industrial-scale utilisation (Clarke, 2010). The shop was opened by Gabriel’s mother and other family members in 1939 within the family home, just as work began on the bog. At the same time, the nearby Coolagarry housing estate was built, providing 49 homes to workers employed on the bogs. Peat workers and their families would comprise much of the shop’s customer base. In 1951, with full production under way on the bogs, the shop was moved into a purpose built premises next to the family home. As a general store it provided a range of household goods. The family opened a Post Office in 1964, which provided a mail service and social welfare payments. Gabriel’s father served as postmaster. Speaking about the Post Office, Gabriel said, “It was [a] *well used* [emphasis] facility by all the locality.” The family further expanded by

running a mobile shop to the village of Bracknagh for twenty years. Gabriel and Hillary married in 1979 and took over the business officially.

Gabriel said the enterprise reached its peak during the 1950s and 1960s. He recalled: “Back in the Fifties and Sixties they’d be going down the road there... bicycles... in droves of lads and men on bicycles going to work. There was three eight-hour shifts going on in BnM in the summertime, 24/7 it was going.” Gabriel recalled that his father would open at 7.00 and not close until 23.00 or even midnight. He explained that this was not necessarily related to business activities: “There was no other social outlet in the village as such. The pub and that hadn’t been built at that stage. So all the guys would be here in the evening time and they’d be playing cards and they’d be out in the yard there talking and all the rest of it. It was a social hub as much as anything else.”

Gabriel’s testimony correlates to high employment figures in Clonsast identified in a study by O’Connor, Whelan and Kelly (1977). In 1959/60, 586 people were employed on a full-time basis, but by 1976/77 this had nearly halved to just 319, whilst seasonal work had “declined substantially” (figures supplied by BnM and an unpublished report by Fell, 1971, in: O’Connor, Whelan and Kelly, 1977: 2). O’Connor, Whelan and Kelly (1977: 2) concluded, “When turf production ceases, economic activity in the area will be seriously affected unless alternative industries can be introduced either by the IDA or through diversification policies by Bord na Móna.” This is an early example of the identification of the need for alternative enterprise as decline began to set in. Forestry trials began in Trench 14 of Clonsast bog in 1954 (Mooney, 1958) and would later shape thinking about cutaway bog after-use, while evidence of the peat industry of the past remains in wider the landscape (see plate 5.2).



Plate 5.2 A tip-head, Co. Offaly This derelict facility once enabled the loading of vehicles with peat from above. Relics of the peat industry past can be found across the Irish midlands and are instructive of its slow decline.

Fergus (23) owns and works in a public house in east Co. Offaly, a place he described as being in “the thick of the bogs.” He also ran a Post Office and small grocery business beside the bar until February 2019. Like Gabriel and Hillary’s shop, the bar’s success is bound up in the fortunes of the peat industry – in this case, the Croghan briquette factory, which opened in 1961 (Clarke, 2010). Fergus recalled the establishment of the bar: “My father built it here in 1964 on a greenfield site. This was our garden of old. I was born next door in the house.” He continued:

When Bord na Móna started down here in 1961, [my father] felt there was a great opening for a pub. In all the time the factory was open and going and there were up to 135 people... working up there at one stage, and this place was absolutely flying. I remember days back in the ‘70s and ‘80s when there’d be 20 or 30 or 40 lorries out there, queued up to get into the factory... and men in here having a cup of tea or a pint of stout or whatever the case may be at the time.

At the time of interview, Fergus had worked for 55 years in the bar. I asked Fergus when sales were at their highest. He indicated this was between the mid-70s through to the mid-80s. He then added: “The first time Bord na Móna... let people off, reduced their staff [was] in 1988.” This Fergus said, led to a “total downturn.” I asked Gabriel and Hillary about the slowdown of their retail business. Gabriel said it set in by the early-1980s, with a ‘big decline’ once the bogs and the Portarlinton power station closed. This was in 1988 (McCowen and Culleton, 2005).

The closure of the Portarlinton power station occurred around a time when peat briquette production was also under strain. Unlike the bogs which were running out of peat however, the briquette factories had too much capacity. Harvey (2001: 80) described such crises: “Overaccumulation is manifest in periodic crises marked by falling profits, idle productive capacity, over-production of commodities, [and] unemployment.” Details pertaining to this crisis can be found in a testy exchange between Tom Enright (then Fine Gael TD for Laois-Offaly) and the then Minister for Energy, Robert Molloy, (then TD for Fianna Fáil) in Dáil Éireann, June 1991. Enright made representation⁶ regarding the temporary closure of the Croghan and Derrinlough briquette factories. He opposed the proposed 18-week closures which would see 60 workers laid off in Derrinlough and another 45 laid off at Croghan, having argued that “Unemployment is already too high in the country”, and that, “These lay-offs will aggravate further an already difficult situation.” Enright claimed that “Briquettes and turf are indigenous fuels which provide a great number of jobs in the midlands.” He added that, “Jobs are high on Fine Gael’s priority list, as is a clean environment.” In his response to Enright, Molloy rationalised that the temporary closure of the four briquette factories operating at the time was due to overproduction, citing collective output of 568,000 tonnes per annum against estimated sales of just 396,000 tonnes. Molloy stressed that the decision to close was made by BnM, and did not require his consent. He said, “It would be quite improper of me – and I do not believe that the House would find it acceptable either – to seek to interfere with the board⁷ carrying out their statutory functions. Nevertheless the board have notified me of their proposals in view of the importance of the matter to the workers concerned.” Molloy continued: “I believe that the board’s emphasis on improving the profitability of the company, while it may have painful effects in the short term, represents the best means of ensuring the long term viability of the company.” This was in response to what he described as the company’s “severe financial difficulties in recent years.” Molloy then argued that the closures would not be as long as Enright had stated. Despite these reassurances, BnM decided in March 1992 that the

Lullymore briquette factory should close the following year due to the company's overcapacity crisis (Clarke, 2010). Further temporary closures at the remaining factories occurred in the summer of 1997 due to continued overcapacity, and Croghan briquette factory shut on a permanent basis in April 2000 (ibid).

I asked Fergus how business had been in recent times. He responded: "Ah, since 2000... Since the factory closed here, across the way [deep breath, pauses] it has reduced drastically. Not alone the factory closing, but all the bogs that were supplying peat to the factory." He later added: "After the factory closed *it was a disaster* [perplexed tone]... When people have money, and wages are pocketed every week, it's spending power. When them (sic) people are down to a small amount of pension... it's a different ball game." Fergus described how the closure of the factory did not occur in isolation: "Rhode power station across the way there, which was also supplied by Bord na Móna – it closed in 2003." Fergus estimated the jobs loss at the time to be between 500 and 600 workers. He identified who they were: "They were farmers, part-time farmers that worked with the bog, and they were also full-time Bord na Móna employees. And they were all social men that loved to come in for a pint, and have a bit of a sing-song and play a game of cards. That's the way life was at the time. It was a lot simpler than it is today." Fergus's testimony indicates that the impact of the briquette factory closure was compounded by the shutdown of the ESB Rhode power station three years later. A similar situation arose in Kildare in 1993 when the Lullymore briquette factory and ESB Allenwood power station closed.

Fergus closed the Post Office in 2019, citing a lack of customers. I asked Fergus what kind of future he expected for bar. "Hard to know. [deep breath] You'd knock a living out of it, providing you didn't have to... pay staff... you'd knock a week's wages out of it, and work hard yourself. It's a hard life." Finally, I asked Fergus how he felt about BnM. He responded, perhaps with reference to the closure of the briquette factory, in a jovial manner: "Well, if you asked me that 20 year (sic) ago I'd [say] I'd fucking shoot them! [laughs]," before giving his true thoughts: "I'd say generally... they've been very good. I've [farm] land neighbouring Bord na Móna. They've been very, very good to me down [through] the years... Been great neighbours now, I'll have to say that, particularly here in the factory... They were very good to me."

Gabriel and Hillary's business did not close until 2018, thirty years after the decommissioning of Portarlinton power station. To make ends meet, Gabriel worked as a sales rep for 25 years, while Hillary managing the shop and post office. The closure had a broader social impact on the village. Hillary described Walsh Island: "...Small community – you knew everyone. You knew their parents... You knew their secrets.... You knew that people were going to miss you. People relied on you for different things. They mightn't have bought a whole lot in the shop... You kept them sane at the same time." Hillary continued: "They came in and shared their problems. If someone had a row with their husband, or they were thinking of breaking up... everyday life stuff... they were able to come in and share it with you and talk to you... That's all gone now." I asked the couple how they felt upon closing their business. Hillary responded first: "Sad... in ways. You felt at times you were letting down your customers. But you hadn't enough customers to keep it going. And both of us were at an age... and we had health problems, and... it was just time to draw the line." Hillary felt that they could possibly have continued trading for a few more years, but acknowledged that "deep down, I knew... I was banging my head off a brick wall because between the overheads... you just weren't making money." I asked why they had kept the business open for so long, given the challenging circumstances. Hillary responded in an emotional tone, "It's kind of built into you." Gabriel then supported Hillary by saying, "*It's part of you* [emotional tone], it's in your DNA." Hillary added, "It's your life. Like, everything.... Everything... circled around the shop (see plate 5.3). Everything..." A sense of an intimate community lost is apparent in the couple's testimony. Hillary told an anecdote that illustrated how things had changed in Walsh Island: "We have new neighbours here across the road, they're there about three weeks, and we only knew that yesterday." Gabriel added:

The old community that we would have grown up with... [Hillary's] from Walsh Island as well as myself. And as I said, you would have known everybody. You could run next door, hand your kids over the fence, "You mind them for half a day? I'm going to the doctor's," or whatever... Never a problem. Anybody in trouble or anything like that, people all came around and helped. I suppose time changes everybody.

Hillary and Gabriel perceived that the community spirit still existed, albeit to a lesser degree, in the older people. I asked the couple who the "new community", in contrast, were. They responded they were people who moved into the area during the Celtic Tiger. The couple do not know these new arrivals as well as the people that they grew up with – the relationship is

different. Hillary stated that the new arrivals work in Dublin and slept in Walsh Island; she described it now as “a sleeping village.” She explained Walsh Island is attractive for Dublin workers as it is inexpensive to reside there and located within ten minutes of the Portarlinton train station, which provides transport to the capital.



Plate 5.3 Gabriel and Hillary’s shop What was once a successful retail business is now closed.

I asked Gabriel and Hillary what BnM means to them. Gabriel responded: “Without Bord na Móna we would not have *existed* [emphasis] as such.” Hillary added, “It was everybody’s bread and butter.” Brendan (30), a turf-cutting contractor and community representative expressed a similar sentiment: “I grew up on a small farm – we’d sell a trailer-load of turf... to *survive* [emphasis] because there was no money; two bedroom house. I don’t think we had a telly until 1978 or ‘9. And if you wanted bread and butter... the bog, at a certain time of year might have put the bread and butter on the table for you.” I asked Gabriel and Hillary if you took the turf away from Walsh Island, what would exist in its place. Gabriel said, “Nothing.” Hillary continued, “The houses would never have been built.... Probably would have just been

farmland.” Gabriel then stated, “Just a farm village... I don’t think it would have developed without Bord na Móna... *Couldn’t* [emphasis] have developed without Bord na Móna.”

Decline is felt across the midlands. Lanesborough (Lanesboro) is a small town that sits to the east of the River Shannon in Co. Longford. To the west is Ballyleague, in Co. Roscommon. They are geographically connected (via a bridge) as well as economically and socially integrated. Lanesborough is home to the ESB Lough Ree power station (plate 5.4). This high efficiency plant replaced the ESB Lanesborough power station that had existed on the same site up to 2004. BnM supplied peat to both power stations. Nearby, Victor runs a small shop, and has done so for 40 years. We met in March 2020, just a few the months before the plant’s closure.



Plate 5.4 ESB Lough Ree power station, Lanesborough, Co. Longford This image was taken in March 2020, in the months prior to its closure.

Victor described what the ESB Lough Ree power station brought to his shop. He emphasised the employment at both the power station and its supplier BnM: "... the people coming to work in the station – you get the spin-off here." I asked Victor how his business would be impacted by its then imminent closure. He response surprised me: "Not as much as I would have said ten years ago." He elaborated, "There are only 38 working in the station⁸." I asked him what the peak employment had been. He said it had been approximately 160. I inquired if this had been in its previous iteration, the ESB Lanesborough power station, to which Victor responded in the affirmative. When it closed in 2004, Victor said it had employed 95. He explained how the decrease in the numbers of workers through time can be felt in the shop:

Now you don't know there's a shift change. Before... you always did because guys came in and got whatever they wanted here, whatever we could supply them with... You always saw every shift change... There was one at 9 o'clock in the morning... the guys that were going in and coming out all stopped for a paper and all of that. The guys that were going in at [the] 4 o'clock shift, they were getting some papers to go in with and some refreshments.

Victor, Fergus, Gabriel and Hillary's contribution to this study provides empirical evidence of the dependence that small businesses have had historically on the peat industry. Moreover, this research indicates that the decline of the peat industry has not suddenly occurred, but has instead been taking place for decades. The long closure of the sector raises questions around social justice and just transition, not only for workers, but for the communities that developed around it. In the next section, the broader social impacts arising from the slow wind down of peat production are examined.

5.4 WIDER COMMUNITY IMPACTS FROM THE DECLINING PEAT SECTOR

Victor (21) is both a businessman and a prominent community activist. He provided insight into the broader socio-economic relations between the peat industry and the wider community. In his interview, Victor identified a connection between the peat industry and human development: "All I will ever think of when I think of Bord na Móna is education." Victor's two sons, as young adults, worked part-time during the summer months in BnM. He said this employment "paid for their college." He added: "The amount of young fellas that paid their way through college year on year... it's seen so many young lads through college. It took the pressure off families... If you had a good summer out there, you could have young fellas

coming home with €700-800 into their hands [every week] ... Over a ten, twelve week period - that was their college for the year.” Weather could impact on take home pay, but Victor contended that young people could expect a minimum of €250 in these circumstances.

Whilst work in the peat industry enabled young people to seek an education further afield, its subsequent decline had socio-economic ramifications. Victor expressed indignation that younger people from the area who have left “have nothing to come back home to.” He continued: “So, because they’ve nothing to come home to it’s just going to be left to us, an aging community, you know? Kids and grandkids – they’ll be just so far away from us.” I asked Victor what the implications are. He responded: “It means the death of the town. It means that there’s no life, because the... spice of life for me are young people.” Victor expressed concern about unemployment more generally in the Irish midlands and spoke of “brain drain” from the region: “What’s happening now with the brain drain is that there is nothing here. You know, you look at Longford town – there is nothing. You look at Roscommon town, there’s nothing coming into it.”

Former BnM worker and community activist Alan (3) expressed disquiet about younger people migrating out of rural Ireland. This, he said negatively affects the social fabric of midland communities. This will have implications for his employer, Irish Rural Link’s vision for ‘sustainable rural communities’. Alan applies the term ‘sustainable’ in this context to describe a town where there is a balance of age groups present during the day and night. To achieve this goal he said, a town must be able to offer well-paying jobs so that people do not have to leave the locality to work. Therefore, a sustainable settlement will take measures to ameliorate the problem of ‘internal migration’, a phenomenon whereby people reside in one place but commute long distances to work.

Barry (22) is a BnM landscape manager living and working in Co. Offaly. His testimony mirrors Victor’s. Barry said BnM “Sustained the local communities in the [midlands] region, and sustained a young viable population in [nearby] towns.” He described one small village near the BnM Boora bog group: “Ferbane is very much becoming [deep breath] a dormitory town... with very much an aging population.” Barry paused to think before adding:

We’re in very low numbers, say, of kids going into national schools. So the whole social structure... Bord na Móna *going* [emphasis] out of the region is going to dismantle the whole

social structure of the local communities, in the sense that... we won't be able to maintain the young population... in our communities. And that's my big worry for towns like Ferbane, like Kilcormac. How are we going to survive? ...That is the challenge facing us.



Map. 5.1 Kilcormac, Co. Offaly, in the bog landscape (encircled in blue) The town sits at the centre of Offaly. To the north is the BnM Boora group of bogs which now host the Lough Boora Discovery Park (see Chapter Nine). The Slieve Bloom mountains lie to the southeast. Source: Apple Maps.

The sunset of industry in otherwise 'single-resource towns' (Bell, 2020) can have devastating implications for those residing there. Kilcormac, Co. Offaly (see plate 5.5), is a typical midlands single-resource town dependent upon the peat industry and subsequently impacted by its decline in through time. 1,118 people lived in Kilcormac in 1986, the height of the Irish peat industry, but this number declining to 973 by 1991 (Freighery, 1997: 36). However, the population has stabilised since. It stood at 935 in Census 2016.

Ed (4) and Gary (8) are retired BnM workers, but continue to contribute to their community by volunteering in the Kilcormac Development Association (KDA). Gary described the town of Kilcormac: "It's a very close knit community... Everybody knows everybody else, which is very rare now... Everybody looks out for everybody else." I asked Gary what were the principal issues facing Offaly, and Kilcormac village in particular. He answered: "Well,

unemployment of course. Unemployment. Bord na Móna absorbed every male anyhow at least, and some females.” He continued: “We’ve seen that downturn in Bord na Móna going on a while now. It’s not just a ‘*snap*’ [emphasis], it’s been reducing and reducing, but with the end of life... coming from Bord na Móna, that’s going to have a huge impact. It’s not just Bord na Móna, there’s people supplying them with materials and supplying food – there’s a bigger circle of people going to be affected.” I questioned Gary on other socio-economic issues in the locality. He described the “aging population” as one such problem. He estimated that in the town’s BnM-built estate, St. Cormac’s Park, some 80% of residents are now retired. He remarked, “There isn’t many families coming in, because... well, there isn’t any jobs here for a start.” He then described how there had been some new houses built, but the adult occupiers are at work, “so you don’t see them, they’re gone during the day. They just come back and they need to rest at night ‘cause they’re up early in the morning – they’re gone again.” Ed concurred: “It’s more like a dormitory town... they’re just sleeping here and moving on.”



Plate 5.5 Kilcormac town Images taken on fieldwork in Kilcormac. *Kil* is Irish for ‘church’. The village is named after St. Cormac.

The lack of employment has impacted on Kilcormac for some time. The outward migration of young people was noted as far back as the mid-1990s in the Lough Boora Parklands pre-feasibility study (Boora Enterprise Group, 1994). I inquired as to whether or not the offspring of those retired people living in St Cormac’s Park were still residing in Kilcormac. Gary said his own two children had stayed, but that over half, he estimated, “had to go away.” Ed commented: “We’re losing all those young, energetic [people]. You get to know them and the next thing they’re gone... They’re four sheets to the wind here, all over the world.” Ed also

described the employment opportunities for adults aged in their 50s and 60s: “The hopes or the chances of them getting any work I’d say would be slim to none.”

The economic decline and lack of social activity impacts everyone as it erodes services. At the time of my visit, there was no café or restaurant in Kilcormac. Ed said the local garda station had “all but closed” and remarked “our fire station is gone.” I asked Gary if Kilcormac had become dependent on BnM and its energy customer, the ESB. He responded: “Ah yeah, sure there was nothing else.” He continued: “When they were there... you were sure of a job. Even if it wasn’t a permanent one, when the summer came, you were guaranteed getting in, to get maybe 6 months.” This, however, had its drawbacks as Gary explained: “That meant that no other business was looking to come there, because you couldn’t have the people for it.” I sought clarification that new employers could not attract workers. Gary responded: “You couldn’t get staff. You wouldn’t get them, because Bord na Móna paid well.”

The evidence presented in this section indicates that the peat industry enabled young people to earn significant money which helped pay for their education. However, the slow decline of the industry in time and the wider socio-economic repercussions arising from this made the region unattractive to return to once people were qualified. Moreover, those people that do reside in midland towns are moving out during the day to work elsewhere. This impacts on local services and business, further contributing to decline through time.

5.5 CHANGING RELATIONS IN BORD NA MÓNA

This chapter began by identifying the positive relations that existed between Bord na Móna workers and their employer. Many contributions equated Bord na Móna with life itself, and were gratefully that the work they did helped raised their family and pay their mortgages. However, the values people once held are changing as Bord na Móna has evolved through time.

Frank (6) is an ecologist at Bord na Móna tasked with rehabilitating its post-industrial bogs. We met in August 2019 at the Bord na Móna Littleton bog group, Co. Tipperary. He remarked, “At the moment it’s a challenging time because things have been changing.” Frank acknowledged the hardships for his co-workers: “I know it’s a challenging time for a lot of my colleagues, particularly in peat extraction, but I suppose I, taking a more longer term outlook... I see huge opportunities for this land into the future.” As an ecologist, Frank’s skills are now

highly valued, unlike the peat workers who once laboured in the bogs and in the factories they supplied.

Elaine (13), an ecologist, left Bord na Móna in 2019 of her own accord (pers. comm. 07/05/2021). I interviewed her in the months thereafter. She remarked, “Bord na Móna was all about community... the old-style Bord na Móna.... So there’s a difference between the old-style Bord na Móna and the new style, [which] is... slick... very, very corporate, and very different from the old style.” Bob (2) held a similar view: “The culture within Bord na Móna has changed in the last number of years.” He elaborated: “When I started in Bord na Móna back in ’75, I was told by my peers and by my neighbours... I was a young lad at 18... and I was told I’d have a job for my lifetime and it was permanent and it was pensionable and you were looking at a totally different type of job. So, anyone that would come into Bord na Móna now is probably on a *contract* [emphasis].” He continued: “So the amount of people that will have contracts, its system of employment nowadays, [the] amount of people that will have contracts in Bord na Móna will increase, and permanent, pensionable people will fall off.” Ed (4) expressed similar sentiments: “I have nothing against the company, only the way they’re treating people now... It’s a completely different management regime that’s in there now... it’s almost like they’re in there to close the place now. It’s a bit disturbing.” I asked Gary (8) in August 2019 how he felt about the company, seven years after his retirement. He responded, “It’s a completely different company.” He expressed an understanding that peat production would inevitably end, but had concerns regarding ‘the transition’: “If it happens sudden[ly] it will have a huge effect on the smaller areas like Kilcormac.” The following month, Mr Justice Garrett Simons’ ruling regarding peat extraction on sites above 30 hectares effectively banned industrial production, hastening the demise of the sector fast than anyone had anticipated.

5.6 CONCLUSION

This chapter examined relations between people and the peat industry. The data presented shows that many of those who worked in Bord na Móna in the past had positive experiences. They felt that their work supported their families and gave them a good quality of life. The peat industry did not merely provide direct employment, but also indirectly contributed to local economies. Small businesses grew to support the sector. Its long decline has had significant implications for those who became dependent upon it. Communities that once flourished during the height of peat production from the 1950s into the 1980s have struggle as the industry

declined. Outward migration is now seen as a problem. Furthermore, people are now relating to Bord na Móna differently. This is explored in more detail in the next chapter, which focuses on Bord na Móna itself.

Footnotes

¹ An apprenticeship

² Mechanical worker. In Bord na Móna, these workers were usually tasked with fixing trains and production equipment.

³ A maker of replacement parts. In Bord na Móna, a lot of the parts used by fitters were made in local workshops by turners.

⁴ Good humour between people

⁵ Making fun of someone in a jovial manner

⁶ See: <https://www.oireachtas.ie/ga/debates/debate/dail/1991-06-12/41/>

⁷ Bord na Móna is often referred to in shorthand as ‘the board’ in midlands Ireland. This contraction may have its origins in the legal framework that created the company. See: Turf Development Act 1946 where ‘a board’ is established, “to be styled and known as Bord na Móna.”

⁸ Victor (21) stated later in the interview that there were 39 workers and confirmed this in personal correspondence (18/06/2021). In Rick’s (20) interview, he said there were 41 people working in the power station: 37 men and four women.

CHAPTER SIX:

THE LONG DECLINE OF BORD NA MÓNA

6.1 INTRODUCTION

The recent wind down in peat production has garnered considerable media coverage. This chapter argues that Bord na Móra has been in decline for many years. Like Chapter Five, it too speaks to the following research question:

What are the socio-economic implications for peat workers and midland communities once industrial bogs close?

Chapter Five presented empirical evidence gathered from small business owners and community activists revealed a long decline in the Irish peat industry. In this chapter, attention turns to BnM itself. Beginning in the mid-1980s, data is presented which corroborates the evidence of Chapter Five that BnM has been in decline for decades. The end of industrial peat-for-energy did not arrive suddenly, but instead at the end of a long, slow closure.

The chapter begins by discussing the most significant fall off in workers in the company's history: the late-1980s/early-1990s, and the company's restructuring in response to the its crisis in over-expansion.

6.2 RESTRUCTURING BORD NA MÓNA

In 1986, BnM released its most iconic promotion. Accompanied by The Dubliner's *Marino Waltz*, the television advertisement depicting family members gathered around a cosy briquette-lit open fire belied the financial crisis the company was embroiled in. Over-expansion in response to the Oil Crises of the 1970s had left BnM indebted and uncompetitive (Clarke, 2010).

BnM's history is one marked by change; of expansion and retraction, investment and divestment, innovation and failure. The board's instability has had implications for its

workforce and the communities which built up around it. Clarke (2010: 100, 199, 221) presented an historical account of peak BnM employee figures (table 6.1). This reveals that recent job losses in BnM have not been as numerically significant as job losses in the past. These statistics do not diminish the very real socio-economic implications that arise from contemporary bog closures. Rather, they illustrate that job loss has been a component of the company’s history. Moreover, population decline is associated with job loss as identified in figure 6.1.

Table 6.1 Bord na Móna employment through time Source: Clarke, 2010: 100, 199, 221, 288; Nigel (D), pers. comms. 9/07/2021).

Year	Context	Peak Employment
1953	Second development programme	7,000
1972		5,410
1980/1	Third development programme	7,078
1983/4	Third development programme	7,171
1987/8	Appointment of Eddie O’Connor; financial difficulties	5,959
1991/2	Redundancies; Group employment schemes	2,767
2000/01		2,416
2021	Brown to Green strategy	1,500

As Chapter Five demonstrated, many small businesses were dependent on the peat industry. However, it is difficult to gauge indirect employment figures. According to O’Connor (1989), the ESB employed 1,199 people in peat industry roles (adjusted to incorporate a proportion of their headquarters’ overheads) in 1988, just after he assumed office as managing director in BnM. Together with BnM workers they were paid a total of IR£85.5 million, which O’Connor (1989: 27) acknowledged was spent in “underemployed areas of rural Ireland.”

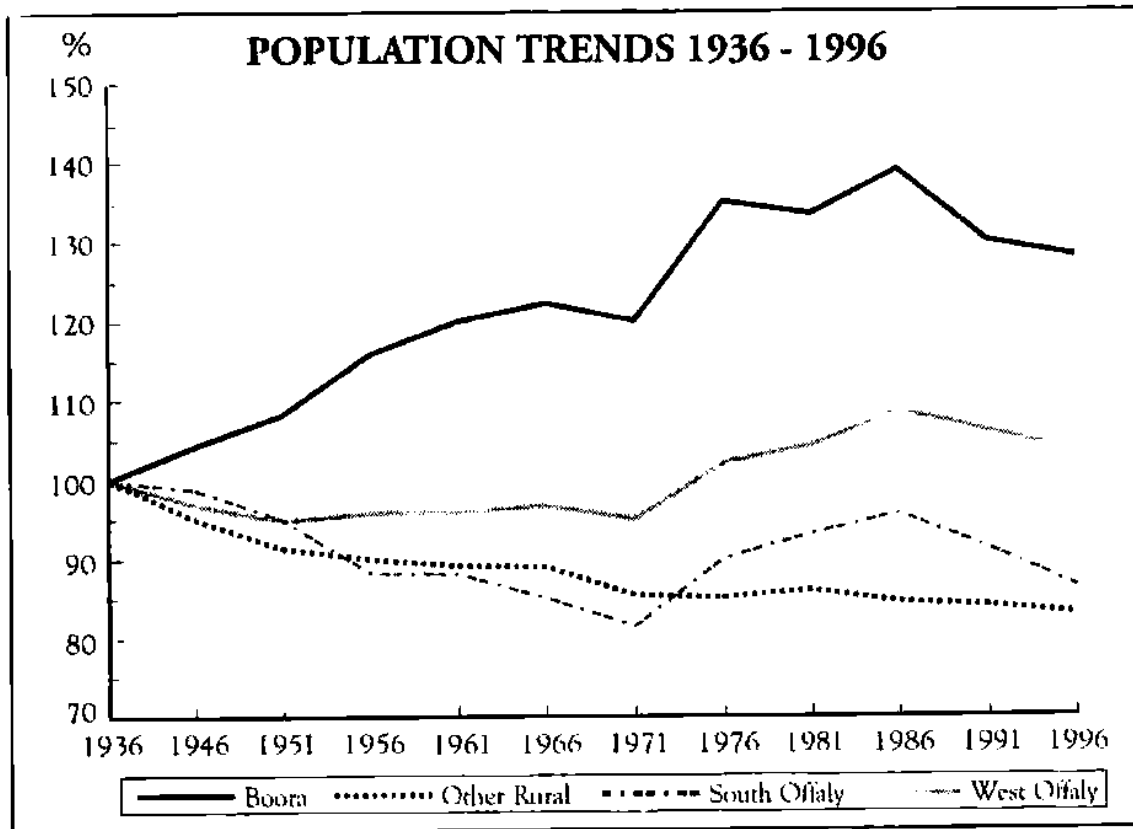


Figure 6.1 Historical representation of Co. Offaly population trends A population graph taken from Feighery (1997: 37). Numbers peaked in Boora alongside the height of BnM employment in the mid-1980s. Note how the population began to trend downwards as workers were let go in the late-1980s and into the early-1990s.

BnM overexpanded its operations during the Third Development programme in response to the international oil crises of the 1970s. The company opened bogs for production which hitherto fore had been considered uneconomic to extract from. By the mid-1980s the company was in significant debt. A task force reported in early 1988 that “radical changes would be required” in BnM (Clarke, 2010: 236). One recommendation later given was that BnM be divided up into three separate business units: solid fuels, milled peat and horticulture. In the Turf Development Act 1998, Bord na Móna plc was established and its subsidiaries were formalised under law. As part of BnM’s restructure, its new managing director Eddie O’Connor made radical changes to how the company ‘made peat’. He expressed a vision for BnM: “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 at profit across the world stage (O’Connor, 1989: 32).” O’Connor (1989) did not see peat merely as a source of energy or growing medium, but also as an ‘environmental’ product which could be used in various innovative ways to clean water of sewage and other pollutants, absorb

spilled oil, and remove odours emerging from industrial plants. One of the notable products to emerge was Puraflo, which treated wastewater emerging from septic tanks. Peat production would nonetheless remain central to BnM's economic activity. However, it would have to become more efficient given the financial problems BnM found itself in.

A group including Eddie O'Connor and Donal Clarke visited Finland in April 1988 to assess the operations of Finnish peat company Vapo. The working arrangements were radically different in Finland compared to Ireland. Clarke (2010) later recalled that the scale of production bogs in Finland was smaller than their Irish counterparts. Furthermore, the machinery used in production was different. Instead of using bespoke peat extraction machines like those used back in Ireland, the Finns he said used tractors to pull various attachments. Bord na Móna employed workers to produce peat, whereas in Finland Vapo contracted work out to local farmers, with payment based on the "amount and quality of peat produced" (Clarke, 2010: 236). BnM output per head of worker had been static between 1967 and 1987 at 1,550 tonnes of milled peat, while the Finnish equivalent in 1987 was 3,500 per head (ibid). Following the trip to Finland, O'Connor made significant cuts to the workforce and invested money into new machinery. Amongst his most notable contributions was the reformed labour arrangements in the form of the autonomous working groups.

In 1989, Hugo (27) began work in the nascent group system¹. He was based in Templetohy at the Littleton group of bogs until 2015. He described how this new system transformed the fortunes of both the company and its retained employees: "In '88, Eddie O'Connor took a group of people from the unions to Finland, and I was one of them, to show how Finland produced their peat in groups." Hugo described two systems eventually used by BnM: 'Enterprise' (Employee Enterprise Units; EEU) and 'Autonomous Enterprise' (Autonomous Work Groups; AWG): "Enterprise was you're totally out on your own – you leased the machinery off Bord na Móna, and they gave you a budget say, and it's up to you to work that budget. You had four or five categories of workers. You had say, drivers, you had supervisor (sic) and you had fitters. And you were totally independent of Bord na Móna as such." This model is similar to the Finnish approach of independent workers contracted to produce peat. Hugo advised that it "only came in on a small scale." I inquired if it was successful. He responded: "It wasn't because it came into the midlands and there was... it was very anti-change, and people objected... It didn't work. The people that went into the enterprise units went back into autonomous enterprise."

Hugo described the alternative approach: “Autonomous Enterprise then was Bord na Móna looking after your affairs, but you got an area of so many acres, and you operated... that area, but you were linked to Bord na Móna... you had no headaches as such, you hadn’t to borrow money to pay the lads for a period of time, none of that. So Bord na Móna looked after your accounts.” Under the EEU system, Hugo confirmed that the group had to cover wages. According to Hugo, this model lasted just two years, whereas AWG lasted for more than twenty years. I asked Hugo to describe his experience in AWG. He answered, “We produced peat for the factory, but we had total control of the manpower. Okay, the people were getting employed through Bord na Móna, but how we operated was our [decision].” Hugo described the payment system in place for the groups: “Our wages [were] based on production. So we had a basic pay which... to earn that basic pay we had to get... achieve 61% production... After 61%, that’s when you when you started to making money for yourself.” Hugo continued: “There was good reward... [Eddie O’Connor] brought in bonuses... different things... If your moisture was right, if your tonnage... there was great bonuses at the end of it.” I asked Hugo to explain the bonus system. He responded: “We had to get 61%... If our target was 100,000 tonne, we had to get 61% of that. And at 61% we had our basic salary earned.” Hugo outlined that bonus was paid on production over 61% and even above 100%. Hugo said workers who achieved less than the target still got their basic wage: “In 2012 we only got 38% target, but we got our basic pay.” He continued: “In 2013 [it] was a massively good dry year, and we achieved in the unit I was operating... 178% wages.” I enquired if this made up for the poor year previous, to which Hugo responded: “Made up for the year *plus* [emphasis].” I asked him if a worker could earn over two thousand euro in a week and he confirmed that this was possible and could even exceed this. Gordon (19) said that in the best possible circumstances, where a large group worked on a high quality bog, each person could earn as much as €100,000 per annum (pers. comms. 13/6/2022).

I asked Hugo what specific roles he and others had in the group system. He explained he did “everything”, and, “there was no demarcation.” He added, “I was driving a harvester, I was driving a miller, I could be doing... ten different jobs. And so was everyone else... Whatever had to be done was done.” I asked Hugo if there had been specialists for each job. He responded: “Say, up to ’89, that was the case. If I was a harvester driver I couldn’t drive something else, you had to get permission to drive.”

This section discussed the crises response in the late-1980s in BnM following its over-expansion in the 1970s. Data reveals that over 4,400 roles were lost in the company between 1984 and 1992. Never again would BnM employ as many people. However, the workers that were retained enjoyed new working relations with the company. They received a level of autonomy and were financially rewarded for increasing production. Employee numbers slowly declined during the 1990s but not at the rate seen in the late 1980s. However, the AWG system would not last.

6.3 THE EMERGENCE OF NEW EMPLOYEE RELATIONS

In this section, new working arrangements in BnM are examined. The impact on workers is identified.

The bonus payment systems would erode in time and AWG was scrapped in 2015, according to Hugo. He explained, “Management wanted to make cheaper peat,” Hugo explained, “So they were looking at us, they were looking at different things, as managers do, and they started clipping the bonuses and stuff. They didn’t abolish them, but they started clipping...” I asked Hugo when this process began and he responded, “After the mid-90s.” He continued: “If there was savings in diesel or if there was savings in mechanical... it would just be added to our bonuses. But that was abolished.... They never went near the basic pay, it was the bonuses and in all fairness, up to... 2015, they never went near the moisture or the up-tonnage bonuses.”

I questioned Hugo about its end. He said: “Areas were getting smaller... *the cost* [voice up]... really it’s about cost. If you have four or five team leaders running an area, initially that area was supposed to be between [2,500] to 3,000 acres. But as the acres [were] reduced, you still had your four or five team leaders, and that cost was enormous. So the acres [weren’t] able to carry the cost of the [employees].” Hugo added: “With the PSO levy going off the peat for going into the power stations, Bord na Móna had to reduce the cost of peat to stay running... So they restructured the pay structure of Bord na Móna. They restructured seasonals, they brought in RFTs (note: discussed later), different things, just to get down the cost below €20 a tonne.” Hugo said that they did not quite manage this, achieving a cost per tonne of between €21 – €22. The Public Services Obligation (PSO) levy that subsidised peat combustion was removed from Edenderry power station in 2015 and replaced with the Renewable Energy Feed-in Tariff (REFIT) subsidy to support biomass in a co-firing scenario (see plate 6.1). The PSO

was subsequently removed from the ESB’s West Offaly and Lough Ree peat-fired power stations at the end of 2019. Both closed permanently in December 2020.



Plate 6.1 Bord na Móna Edenderry power station, Co. Offaly The co-fuelled power station (left) lost its PSO peat subsidy in 2015. REFIT 3 funding for biomass fuel (right) was applied thereafter.

Hugo explained the abolition of the AWG coincided with an internal restructuring of BnM in 2015. Notably line managers were brought in. He explained, “People running the operations had to answer more to the line managers.” He continued, “Down here... it went fine... the unions fought a hard battle and the people that [were] involved in autonomous groups and that... if they stayed doing... stayed [doing] their work, their conditions of employment didn’t change... as far as wages and stuff was concerned. So people were happy enough to take it on.”

Seasonal workers (or ‘seasonals’) were oftentimes farmers who worked in BnM during summer months to supplement their agricultural income. It was common for young, college-going men, often the sons of established employees, to work in the company during the summer. In recent times, a new vision for seasonal work has emerged in BnM. Nick (16), a trade unionist representing the interests of all unionised workers in the company explained:

The seasonal workers normally came in for the summer season, harvesting peat, and then they’re let go again. That’s what the seasonal worker was designed to do back in the day – but the reality [now] is different. The seasonal worker is actually starting in December, or January, in the middle of winter. And the reason this has happened down through the years is the company did not want to make these people permanent.

In the past, the seasonal workers and BnM had a mutually beneficial arrangement. Part-time work and temporary contracts supplemented the income of those people and their families who had other full-time occupations. These new ‘seasonal’ working arrangements are different as Nick explained:

[Bord na Móna] were trying to avoid the responsibilities under the legislation which is, if you’ve more than twelve months’ continuous service and the work is still there, you’re entitled to a contract of indefinite duration. So, basically what they’ve done is they were bringing people in, and once nine months has elapsed, even if there’s work still for you, you’d be let go, and they’d take somebody else in from the outside.

Nick added, “There’s hundreds of people like that in the bogs.” This seemingly precarious workforce was further exacerbated by ‘politics’ at work as Nick explained: “People then were being called in and let go at the whims of local management, and it meant then that a culture built up that unless you kept... on the right side of management, well you might not get work next week, or you may not get a bit of overtime, or you might only get six months’ work next year instead of getting nine months’ work.” It is difficult to substantiate such claims. Nick’s next contribution may shed some light into why this might be the case: “All these people have been indoctrinated into a situation where *no matter how unhappy you are* [emphasis], you keep it to yourself, and don’t say it because it may come back to you – you mightn’t get work next year.” He continued, “It is very hard to get that expressed publicly.” He also found it difficult to get people to come forward as shop stewards. Those in that role he said were hesitant, believing, “if they upset management, they mightn’t get out.” ‘Getting out’ I take to mean redundancy.

Gordon (19) worked for twelve years as a seasonal BnM employee and shop steward. We met in November 2019, just over a year before the company announced the end of its extractive activities. Gordon spoke of BnM in a markedly different way to many of the others interviewed as part of this study (section 5.2). He described the precarious nature of working as a seasonal:

Up until... recent changes in management, you were always sure of what you were going to get, be it a small rate or whatever the case may be, but you always knew you were going to get your period on the bog. For some people, it’s less than nine months. I’ve been lucky over the

last few years [that] I've got nine months. That's no longer guaranteed now... you mightn't get called back when you're due to be called back and you might only get six months' work.

Gordon was laid off when we spoke. I asked him if he would get work in the following January. He responded: "If I put on my union hat I'm going to tell you *yes* [emphasis]. But in Bord na Móna's eyes a seasonal is guaranteed *nothing* [emphasis], because they don't care about the seasonals – they use us and abuse us as they see fit. They take us when they want us and let us off when they want to." Gordon said that he had witnessed "people shafted and let off, and never brought back." He contends that this is the 'bad' side of BnM. He added: "If we're in production and we have a couple of weeks' rain – well, we're sent home. But there's plenty of other work that can be done like extracting timber from the bays to make it easier for the machines to work and not damage them, and they just won't do it." Gordon then explained that workers implicated have to rely on social welfare.

It is evident that Gordon's relationship with the company has been strained as a result of his precarious employment arrangement. He described this: "I struggled for a long time. I struggled for seven years there to get up to nine months' [work]. I used to only get six months, and you'd get six months off. I did work other places in between, in that period, but... Look it, there's 'little angels' out there who the foremen love and cherish." This remark suggests an element of favouritism, or the 'politics' that Nick had identified. Gordon was indignant when he described how some workers were apparently favoured over others: "People with a lot less service ended up getting nine months' [work]. And it's just been part of Bord na Móna – it's *who you know* [emphasis]." Gordon explained he eventually got nine months employment, and added, "It makes a huge difference to your annual income."

It is useful to establish a baseline income for an adult residing in Ireland when considering the impact of employment precarity at BnM. Job Seeker's Allowance/Benefit, was ordinarily €203 per week at the time of interview. This sum may be adjusted upwards or downwards based on various circumstances relating to other forms of income and the number of the claimant's dependents. Unemployed or underemployed (part-time) adult citizens may also be entitled to a range of supplementary benefits to subsidise outgoings, including rent and heating. Gordon advised that if we was to claim for himself, his wife and his two children, his social welfare payment would amount to "something short of €400." In BnM, Gordon can work a 39 hour week and receive, in his own words, "Just short of €500 before stoppages²." With a mortgage

of €100 per week, the shortfall between work and social welfare for Gordon and his family is significant. Moreover, Gordon explained that workers could still earn bonuses through the Payment By Results (PBR) system that he said remained in place.

Hugo (pers. comm. 13/6/2022) explained how incentives changed. Bonuses for providing low moisture peat and ‘up-tonnage’ were paid under the AWG system. These were calculated based on the quantity of peat harvested over a given target and its dryness. A bonus was then paid to the group in May or June and this was divided up amongst the team. Gordon (pers. comm 13/6/2022) said that this was abolished along with the AWG system in 2015. Hugo argued that the removal of incentives backfired on BnM: “It was very hard to manage people because people used to go faster, they used to pick lighter... the harvesters used to drive faster because the crop was lighter and all that. So in the long run, Bord na Móna lost that one, I think.” I asked Hugo how this affected wages: “The wages stayed the same for the senior people. We had senior seasonals coming back in... but *new* [emphasis] seasonals - the wages changed.” The burden of cost reduction was therefore borne by new workers. Hugo said PBR continued, albeit at a lesser rate (pers. comm 13/6/2022).

Gordon spoke about PBR: “So when you’re in production and making peat, you’re on a PBR bonus. So you have so many ‘kilos’ (kilometres of milled peat) to lift daily. So, if you’re in an area that’s... 220 kilos lift for the week... you’re averaging 60 kilos a day. So, 60 kilos a day can... it can vary, it can be €1,200 - €1,300 before stoppages.... Has been higher by the way.” Gordon (pers. comm. 13/6/2022) confirmed that weekly wages could be as high as €1,900. He noted that such spikes in income were temporary: “So we’re looking at a period of between... 13, maybe 15 weeks max, of lifting peat. This year we lifted... our allocation here where I’m based in Clonad, we lifted it in six and a half weeks. So although it sounds huge money, but it’s.... it’s only for that short period. And then you end up reverting back to [normal pay].”

Emerging alongside the ‘New Contract with Nature’, ‘Naturally Driven’, seasonal worker-oriented BnM, came Revised Feedstock Terms (RFT). Nick (16) described this: “People were brought in *doing the very same job as everybody else* [tone up], but they’re on a lower wage.” Nick added further detail beginning with a description of the challenges faced by seasonals: “So, in Bord na Móna, you have seasonals [Nick pauses briefly]... who have no security in relation to how much work they are going to get in any given year. They can be brought in any time, they can be let go at any time, and then their wages are variable as well depending on the

weather, if they get a good harvest or a bad harvest, etc.” He continued: “Now, to compound things then, back in 2016, they brought in these ‘yellow packs’³, RFT workers. And these are people who are actually brought in *on even worse* [tone up] conditions of employment, because they’re actually on lower wages *again* [emphasis].” Hugo (pers. comm. 13/6/2022) recalled that new RFT workers were not eligible for PBR until they were employed for three years at BnM. Hugo (27) described an anecdote which illustrates how the new pay arrangements affected employees:

Two brothers worked with me. They were coming in the one car, they were doing the same job – they were harrowing. One of them was an RFT, one was a permanent seasonal. In one week we collected 21%*. The two of them now worked the same hours, same tea breaks – everything’s the same. In one week, it was a good week, the person that was on RFT was €700 shorter than the person that was permanent seasonal. That was the difference. That’s where Bord na Móna changed. ...RFTs... that’s where they were going to get their costs cut.

*presumably a peat production target

The new RFT system did not directly impact established employees. However, if one sought promotion, their terms of employment would change. Nick said: “Everyone that was in the company in 2016 retained their conditions of employment, but, if you were applying for a promotional position, and someone was in a position who was on say, €35,000 a year, when that person left that position, the company would re-evaluate the position that was after being vacated and they’d advertise it with an RFT rate of pay.” Nick added: “So, if you wanted the promotion, you applied for it, and because you applied for it voluntarily, and you got it, if you accepted it, well, you are accepting that the job that used to pay €35,000 a year is only going to pay €32,000.” This meant that a worker transitioned to RFT conditions even if they had been employed in BnM for decades. Nick said, “If you apply for a promotional position, you see, it was your choice.” Hugo described his experience of RFT when he applied for a new role internally: “In ’16 there was a foreman’s job or operations leader’s job, whatever you call it. And... I applied for it. I got it and I was coming in on different terms as the man that was beside me.” I questioned him about this. Hugo said that the wages were more or less equal but holiday time and sick leave were reduced. His permanent status in BnM did not change, but he informed me, “I was changing my conditions of employment.”

This section explored how worker relations changed through time. In 2015, BnM abolished its AWG system. Workers were then placed under direct control and bonus payments were scaled back. However, many of the changes did not affect established workers, but instead BnM's incoming workforce. This raises questions around equity in the workplace. This is further considered in the next section.

6.4 CONTEMPORARY JOB LOSS IN BORD NA MÓNA

In this section, contemporary relations between BnM and its workers are examined. Five participants in this study were made redundant in BnM. The details of two packages were disclosed voluntarily; one was worth €60,000 while the other was €100,000. However, the redundancy process can lead to discontent as this section reveals.

Trade unionist Nick (16) began representing the interests of energy workers in 2018. He initially believed that it was a growing sector. In time he realised: "It's actually the complete opposite. Energy is still required, but with technological advances and the manner in how we are getting our energy, it became quite apparent that you can generate an awful lot of energy in this country with very little labour." Nick said this weakens trade unionists' bargaining power:

I only have so much leverage because mostly as a trade unionist, if you have a problem with an employer, and you can't get the employer to see your... position, or your view, you normally would resort to taking industrial *action* [emphasis], which was... is the balancing of power between what the workers have and the employer. That's not a viable option in Bord na Móna, because... if the power stations... close down tomorrow, no one will notice.

In October 2018, Bord na Móna announced up to 430 redundancies would take place as peat production was wound down. Nick said: "If everyone in Bord na Móna stopped working tomorrow morning, it would probably suit an awful lot of people." The precarious state of the peat industry at the time raised significant concerns amongst BnM's workforce.

Nick also described an anxiety in employees who wished to remain at work. He blamed this on a lack of transparent communication from BnM: "There was a concern there, because the plans for the company weren't very clear. It was clear very, very quickly that this only appeared to

be the tip of the iceberg.” Derrinlough briquette factory worker Henry (26) is one such example. I asked him if BnM had communicated with workers about the future direction of the company. He responded: “Nobody knows what’s happening.” I asked how long this had been the case. He responded that it had been for up to four years. I asked him what he thought would happen BnM. He responded: “I don’t know what’s going to happen. Honest to God, *I don’t know what’s going to happen to us* [emotional tone].” He described the impact he expects for workers and the wider community when peat operations and their associated bogs close: “There will be an awful, awful lot of jobs lost.” I asked him how many people were employed there. He responded, “There’s about 60 employed in it, permanent... There could be another 60 out the bog.” He added that many in-direct jobs depend on the factory:

There’s lorry drivers... brings in peat... Lorry drivers brings out the briquettes – there’s going to be an awful lot of jobs lost in this, there’s no point saying there won’t be. Like, at the moment now, [we have] contractors in doing work. If Derrinlough closed in the morning, all those contractors would be out of work. They’d be letting go lads as well. So it would be a big loss to everybody.

The demand for briquettes had not gone away, despite the planned closure of the factory in 2024. Henry expressed indignation. He remarked, “If our jobs go... they’ll end up importing briquettes from other countries into this country.” With indigenous production ending, there is a danger that environmental degradation arising from the Ireland’s use of briquettes will be shifted outside of the state. He expressed his frustration at this scenario: “We’re taking the punch for everything, for this environment[al crisis] and the whole lot. You take China, Russia, Japan and even England opening up coal mines and all that. And what we’re putting up into the sky compared to them is nothing.”

I questioned Ian about where workers may go for employment following their departure from BnM. He said, “Let’s put it this way, major employers... you were in Kilcormac – there’s no major employers in Kilcormac.” He continued:

There would be major employers in Tullamore, but having said that, there mightn’t be jobs for everyone there, you know? And it is an aging workforce, Bord na Móna... A lot of people are not going to be redeployed. There’s not going to be jobs, they’re not suddenly going to go into

factories, [inaudible] guy in his mid-50s, with certain skills... redeployed somewhere else, or [employed] somewhere else – for a lot of people; won't happen.

The impact of job loss will affect workers differently. Ian (5), a retired BnM employee said, “It is age-related. I'm 63. If you're my age... for me, I'm left with redundancy... [If] you leave at my age, it doesn't have the impact. It doesn't.... But, if you're 35 or 40, and you have a young family and maybe trying to put kids through college, mortgage and all the rest, it has serious effects because it will be difficult to get jobs in the locality.”

I asked Henry what type of job he would get after working in the briquette factory. He responded: “Who's going to take... a lad on of 50-something years of age? The [construction industry]?... *I wouldn't be able for it* [laughing tone]. You're not going to show an old dog new tricks.” Henry is also illiterate. When asked about retraining, he replied, “Well I'm not able to read or write so... that'll go against me.” Henry's lack of formal education attainment presents a barrier to many forms of occupation. Whilst he confirmed it does not affect his current role, it is likely to impact on his future job prospects, and those of his family. He expressed concern about being able to afford third level education for his two teenage daughters.

I asked Nick if the October 2018 BnM redundancy announcement had been expected. He said, “We had anticipated *some* [emphasis] redundancies, but not the amount that was announced [at] that particular time.” He added:

In 2016 there was an agreement reached between the unions in Bord na Móna and the company at the time, which was buying into the concept that peat extraction was going to cease – it was going to cease over an agreed timeframe – i.e. it was finished by 2030.... And during that 14-year timeframe... traditional jobs of peat harvesting and peat transport and everything related to peat would be phased out.

In this phasing out period, Nick remarked that workers coming towards the end of their retirement “would be let go... with dignity and respect.” In this scenario Nick said, “Nobody would be forced out against their will – nobody would be rushed out, and that there would be some other jobs coming on stream, alternative employment, which would mean that there

would be a ‘just transition’ from a brown peat industry to a green industry.” What was to be a planned, organised, equitable transition over 14 years would occur five. Nick stated:

So when the [job losses] were announced, it sent out a signal that something was wrong. It sent out a signal that this process of phasing out is accelerating....It also sent up very... very serious red flags that unless there was immediate action taken by people who have power to make decisions... it could mean devastation in the midlands – the communities could be devastated. And my concern at the time was that... this was only the start of a process which could lose up to 1,000 jobs in a relatively short period of time, which actually has come true.

I asked Nick how workers took the news. He responded it had been “mixed.” I remarked that a prior contributor to this study indicated that the scheme was over-subscribed, to which Nick responded “Correct.” A complex picture emerged. Nick said some workers welcomed receiving a redundancy package prior to retiring, with some even “waiting” for it. Others, he contended, welcomed the upheaval. Nick described how those seeking a promotion viewed redundancies as an opportunity to progress their own career:

There would be people... in a different phase of their working life. And they would see upheaval like this as being *positive* [slight emphasis], because, in most semi-state companies, there is sort of a hierarchical promotional *tree* [emphasis] where you spend a certain period of time at a certain function, and you have to wait for somebody else who’s your boss to retire before you can actually get promoted. So to have something like this happening – this is actually good news for a number of employees.

However, some workers were unhappy that they were not eligible for redundancy. Nick said there was a sense that BnM management would “cherry-pick” those it wanted to leave. In this scenario Nick said, BnM would keep “good hard working workers who were very loyal to the company”, and use this as an “opportunity of maybe eradicating some of the people who they didn’t want working for them.” Whilst many employees would have been pleased to retain their jobs, others who wanted to leave with a redundancy package may have felt aggrieved for not being included. For Nick, BnM’s actions were “rewarding bad behaviour.” Moreover, decisions surrounding redundancy were economically motivated. Nick said “They will try and let out people with the least possible cost to them, immaterial of the damage it might do to people’s morale, or the fairness of it. It’s purely based on the bottom line.” Nick explained this. He began by outlining how redundancy packages work:

In the voluntary severance package, you cannot get a package which is more than half of what you would earn to your normal retirement age. So, if you take somebody, for example, who is 63 years of age, who is on €30,000 a year, they've two years left – that means, strictly speaking, theoretically, they could earn €60,000 to the retirement date. So based on the criteria of the redundancy package, it means that they can only get [up to] €30,000 in a package.

However, there is a significant issue that Nick addressed in this scenario: statutory redundancy law and the role it has in determining the value of the package. Under the Redundancy Payments Act 1967 – 2014 Schedule 3, Section 19, 1.1 (a), the 'lump sum' is calculated as: "The product of two weeks of the employee's normal weekly remuneration and the number of years of continuous employment from the date on which the employee attained the age of 16 years with the employer..." Applying this in the context of the example above whereby a worker's maximum pay-out was €30,000, and whereby that worker had 40 years employment, their statutory pay-out would be €48,600. Nick said: "The legislation states that if you have 40 years' service... you get two weeks' pay per year of service, plus a week, which means you're going to be get 81 weeks at a maximum of €600 a week, which is actually *more* [emphasis] than €30,000." He continued: "So when the company realised, 'Well these people are going to get more than the year's salary,' they decided, 'Well, okay, it's better to keep these people working than to let them go.'" Nick then stated: "So these people are... being held hostage. And there's a double hit on these people, because, not only can they not get out when they want to get out, these are the people with the most service. They've 42, 43, 44 years' service, and they're not allowed to exit." In a statement, Nigel (D) (pers. comms. 9/07/2021; 14/06/2022) from BnM communications, provided details pertaining to redundancy packages. He noted that these applied to the "most recent voluntary redundancy scheme". Eligible employees were entitled to:

Statutory Payment – 2 weeks' pay* per year of reckonable service plus 1 week's pay, plus

Ex-gratia Payment – 4 weeks' pay* per year of reckonable service maximum entitlement of 104 weeks

Overall Cap: half of earnings to normal retirement date

*A week's pay for both statutory and severance lump sum calculations will be as defined in the Redundancy Acts. The current maximum weekly rate is €600 per week. However, any individual whose personal basic weekly rate exceeds €600 will be paid the ex gratia lump sum at their personal basic weekly rate.

This section addressed the concerns of workers embroiled in a contested wind down of the Irish peat sector. Whilst some employees were made redundant and satisfied, Nick spoke of workers who were unhappy they were retained. Other workers do not want to leave BnM and have very real concerns for their future. A lack of communication from BnM has exacerbated employee anxiety.

6.5 CONCLUSION

This chapter identified and discussed the long decline of BnM since the mid-1980s. Over 4,400 jobs were lost following its restructuring in the late-1980s. Thereafter, the company implemented a new employment system called Autonomous Work Groups (AWG). Employment numbers had thereafter declined slowly. Productivity was improved through employee incentive schemes. However, these eroded in time. Seasonal working arrangements changed to suit the company's needs, rather than the workers'. In 2015, the AWG system was abolished and Revised Feedstock Terms (RFT) were introduced. This meant that new entrants would receive lower pay than their established colleagues, suggesting that commercial imperatives are now central to BnM's functioning, at the expense of its social remit.

In October 2018, BnM announced 430 redundancies. This led to concern amongst some workers for their future, while others welcomed severance packages. The impact on workers largely depended on age. Those who were older were able to claim a pension, while younger people with children are left in a more precarious position. This has justice implications. The final closure of industrial peat extractive activities is addressed in the next chapter.

Footnotes

¹ The descriptors used by Hugo are different to those used officially. An agreement between BnM and employees called 'Partnership for Progress' enabled two new working systems: employee enterprise units (EEU) would work produce peat under contract while on secondment, whereas the autonomous work groups (AWG) saw employees rewarded for the amount of peat produced (Clarke, 2010: 237).

² I later inquire as to what 'stoppages' are. Gordon explained these are deductions from pay such as tax, PRSI and levies.

³ 'Yellow packs' is a trade unionist colloquialism that describes workers on very low wages. It originates in supermarkets' sale of low cost, unbranded goods.

CHAPTER SEVEN:

THE END OF INDUSTRIAL PEAT EXTRACTION

7.1 INTRODUCTION

Peat production on Irish bogs, like any fossil fuel, is finite. As Chapter Five and Chapter Six indicate, BnM had been in a slow decline since the late-1980s. Peat workers and communities were aware that the sector would eventually close as bogs became increasingly exhausted. This chapter addresses the following research question:

Why has Bord na Móna ceased extracting peat from its bogs?

On the 15th of January 2021, Bord na Móna (2021) formally announced its intention to halt peat extraction. In its place emerged a new environment-focused business model, Brown to Green. However, BnM was ceasing peat extraction nine years earlier than originally envisaged in its *Sustainability 2030* strategy (Murtagh, 2015).

Two questions emerge. Why was peat extraction winding down? And why did its end come so quickly? In this chapter, the perspectives of stakeholders are sought in order to gain an understanding. It begins by consulting those closest and most dependent upon peat extraction: the workers.

7.2 WORKER PERSPECTIVES

In this section, a range of views were expressed by peat industry employees. It is in the peat sector's rapid wind down phase, prior to its formal bog closure announcement (section 1.1), that interviews 1 – 32 were conducted; 33 – 35 were recorded in Summer 2021. Operators, those workers employed in manual labour roles or lower management, tended to blame the government's climate change agenda for the closure of industrial bogs, although some noted that peat supplies were becoming exhausted. Landscape managers offered similar perspectives, while senior managers implicated environmental and economic factors. What this illustrates is the sudden closure of the bogs is complex.

When questioned about the reasons behind the then imminent closure of production bogs, BnM operator Gordon (19) blamed the government. He remarked, with reference to peat extraction, that, “It’s an easy target.” A feeling of unfairness was evident in Gordon’s testimony. He said the impact of the closures for midlands will be “devastating.” He then argued a point that would appear throughout other contributions: “They’re *opening* [emphasis] peat-fire power stations, *and we’re closing them* [bemused]. We’re only a little country. For what we’re putting up into the elements, as I said compared to other European countries, it’s very, very small.” Briquette factory worker Henry (26) gave a similar answer to Gordon, blaming the closures of the bogs on politicians, specifically the Green Party. Meeting Henry informally a year prior to interview, his distrust of environmentalists was apparent even then. To him, they threaten his job, his livelihood, and his family’s prospects.

Bob (2) worked as a labourer, bog surveyor, and as a production supervisor at BnM in a career spanning 44 years. He too implicated the state: “I feel it’s a government decision, more or less to do with the carbon footprint and the damage to the climate [from] fossil fuels.” Bob briefly reiterated the narrative of Ireland’s relatively small size, and therefore its seeming inconsequential role in contributing to climate change. Ian (5) was employed by BnM for over 40 years as a surveyor. Ian stated that BnM’s policy against peat production was “coming from the EU.” He added: “Fossil fuels are under awful pressure... we’re going to renewables.... [Bord na Móna] know their time is up.”

Finbarr (24) was employed in several roles at BnM, including a job working as a boiler operator at the Littleton briquette factory, Co. Tipperary, up until its closure in 2018. He now works in the Sabrina/Bord na Móna AES recycling plant which subsequently opened on the grounds of the briquette factory. I asked Finbarr why BnM was winding down peat production for energy generation. He responded: “I’d say it’s just pressure from the EPA.” Finbarr said he did not have much interest in the environment, but conceded that “It can’t be doing good taking all that... bog out of where it was put... thousands of years ago... and burning it in the factory to make briquettes.” He continued, “I know you still have to have briquettes... you have to give back a small bit or stop.” He added, “We’re only a small country... but we have to do our bit.”

Finbarr’s friend and former colleague Hugo (27) worked in BnM for 41 years. Speaking about the closures, he stated, “It’s being forced on them for climate change, it’s being forced on them to close down fossil fuels.” I assume ‘them’ to mean BnM, but I probed as to who exactly was

doing the ‘forcing’. Hugo responded, “I’d say Europe, government, the people they appoint to the top [which they] bring in to do these jobs.” The latter point indicates that there had been changes in senior personnel at the company. Hugo continued to discuss the broader environmental changes taking place in society. “Young people now are being taught about the environment, and being taught about fossil fuels and they have been taught about oil.” He questioned this, “Will it make a difference as far as Ireland’s concerned? I doubt it because we’re too small. I know we have to change, but as far as worldwide, we’re only a little dot.”

Ed (4) worked in administration in BnM’s Boora for 43 years. Remarking on the board’s decision to end peat extraction, Ed stated it was being “driven by external factors. Like, the big thing that is driving it is the whole climate change *agenda* [emphasis]... There’s a big push to decarbonise...” Ed then acknowledged “We have to save the planet,” before tempered this somewhat when he stated, “It’s almost like everything is about ‘green’ now – everything is.” The need to act to transition towards more sustainable economic activities is generally accepted throughout the research findings, but there are tensions and concerns about this process. Who will be made carry the burden? What are the socio-economic implications from this? Ed continued: “Behind all the ‘green’ and all that, are people’s lives, and communities, and it just doesn’t seem to be factored into any of this.” He paused, took a deep breath, thought aloud, frustrated, and added, “We just become almost pawns in a game, you know?”

Gary (8) was employed as a fitter in BnM for 44 years. I asked Gary why BnM was halting peat production. He built upon the responses outlined previously and offered a crucial additional insight. “The bogs are being cutover¹ for a start. I know there’s climate change and all that... there’s CO₂ gases and all this...” I sought elaboration following a brief tangent. “Ah, they are running out of peat,” he remarked, “there’s no doubt they’re running out.” Whilst on fieldwork in Kilcormac, I spoke with local people who that had worked in BnM. Colin (B) is 91 years of age. He was employed in BnM operations for 34 years driving trains and draining bogs. I asked him why the company was halting peat extraction. He said that BnM bogs were now down to the ‘lack’; he insisted thousands of acres of bog had no peat left. I also spoke to another retired worker called Jim (C). He had worked in BnM for 42 years. He corroborated Colin’s perspective when he remarked that there was no peat left in the area.

Four current and former BnM employees, tasked with cutaway bog rehabilitation, were interviewed for this research. Frank (6) is an ecologist at the company. I asked him why BnM

was halting peat production for the purposes of energy generation. He responded: “Well, ultimately, [Bord na Móna are] running out of peat... It’s also a commercial decision.... As our bogs become cutaway, the production costs to continue to extract peat increase, because you have to deal with more and more issues. So the price of extracting peat increases.” Elaine (13), a former ecologist at BnM offered a different viewpoint: “Regulation and carbon emissions. To transition to a low carbon economy. It’s a *driver* [emphasis] coming from government... coming from EU level, from global level. If there wasn’t that driver, they’d still continue to harvest peat.” Barry (22) has been employed by BnM for 40 years specifically to design and develop after-use strategies for industrial cutaway bogs. His response to my question regarding the cessation of extraction echoed Elaine’s: “[Because] of European legislation.” He added, “Carbon release... climate change, and legislation.” Barry expressed concern that these measures may not be enough. “My worry,” he said, “Is that we have stopped the fast release of the carbon, but we’re not stopping the slow release.” Barry identified an important point: carbon emissions do not stop completely following rewetting of the cutaway. Instead, they slow. It is only when a bog is actively growing does it begin to sequester carbon. Moreover, concerns have arose around methane emissions from rehabilitated cutaway bogs. Barry argued that rewetting “creates its own problems. You get littoral zone[s]² in the summer time.” From this he said emerges methane, a more dangerous greenhouse gas in the short term than carbon dioxide.

George (32) worked as an ecologist with Frank (6) at BnM. Although he was a recent recruit at the time of interview in July 2020, he had worked on contract for the company on previous occasions. I asked George why BnM was halting peat extraction. He answered, “Principally because it no longer has permission to do so.” He goes on to say, “There was a High Court challenge to Bord na Móna’s extraction of peat to say that we’re required to have planning permission, which we didn’t have at the time.” His answer refers to the case³ brought to the High Court in September 2019 by Friends of the Irish Environment (FIE) regarding state regulations which permitted continued peat extraction which they claimed were in breach of European Union laws (O’Faolain, 2019). The government had proposed the following two laws to facilitate ongoing industrial peat extraction:

- i. Statutory Instrument No. 4/2019 – European Union (Environmental Impact Assessment) (Peat Extraction) Regulations 2019

- ii. Statutory Instrument No. 12/2019 – Planning and Development Act 2000 (Exempted Development) Regulations 2019

O’Faolain (2019) reported that these laws would mean that companies could extract peat from bogs without planning permission – instead, their activities would be regulated under the EPA’s Integrated Pollution Control licencing system. Statutory Instrument No. 4/2019 would permit a period of between 18 and 36 months for an established operator to continue extraction before they were required to obtain a licence. Mr Justice Garrett Simons set aside both of the regulations, having found them to be in breach of both the EU Habitats and the Environmental Impact Assessment directives. The ruling meant that peat extraction could not continue on bogs above 30 ha in size without the operator having obtained planning permission. Many of those interviewed spoke prior to this ruling. While it effectively banned industrial-scale peat extraction, given production below 30 ha may not be economically viable, the viewpoints of others retain merit, given they were made in the context of the rapid wind down plans announced by BnM in October 2018 and pertain to the slow closure of the peat sector.

Senior management figures offered a range of views as to why BnM was closing its peat business. I met with Nick (16), a senior trade unionist in October 2019. I asked him why BnM was ceasing peat production. He responded, “Well the simple answer is... due to environmental concerns.” Nick then provided a convincing environmental argument for the cessation. He followed up with a second line of thought: “One of the main reasons for the formation of Bord na Móna was to ensure security of supply, of a fuel, to ensure that there was electricity generated in this country.” He continued, “If a number of... power stations were taken out of the grid, no one would notice, because there’s a surplus of supply.” This perspective suggests that peat is now superfluous to Ireland’s energy needs. However, increased demand on the electricity grid as more data centres are built in Ireland may change our energy needs.

Donal (1) worked in communications at BnM at the time of interview. I asked Donal why the company was ending its peat business. He responded, “The line out there at the minute is we’re doing our bit for decarbonisation.” But the reality, he argued, is that BnM’s hand is being forced: “The decarbonisation imperative... is... effectively killing our market.” Rather than a law outright banning peat production, he argued that a less obvious mechanism was being used. Donal explained that the European Union Emissions Trading Scheme (EU ETS) dealt with unsustainable energy production by placing ever-increasing taxes on emissions. The market he

said was ever tightening: “They’ve reduced the amount of credits available, so when you go to buy them... our manager goes to buy credits for Edenderry [power station], and suddenly there’s less of them available – what happens? The price goes up. So he was buying credits at €5 per tonne – now he has to pay €25.”

Oscar (17), former BnM company secretary, also outlined an ‘economic’ argument as to why peat production was to end: the amount of peat remaining in BnM bogs was limited. This corroborates the views of Frank (6), Gary (8), Colin (B) and Jim (C). In 2015, BnM’s *Sustainability 2030* plan committed the company to ending production by 2030. Oscar argued that BnM knew that peat would ‘run out’ by this date. Oscar went on to qualify the term ‘run out’. He said an industrial bog in ordinary production will be ‘economic’. He added, “As the peat on the bog starts to go down in certain places, then you’re not going [in] straight lines – you’re going round, because you can’t take peat out of that bit where it’s all gone.” The flat topography of a production bog is therefore deceiving. Raised bogs grew from lakes and oftentimes spilled out over the surrounding mineral soils (see section 4.3). Ridges of earth were covered over and in time these would be revealed as the overlying peat deposits were cutaway. This is why Bellamy (1986) called them ‘ridge raised bogs’. Production machinery would have to drive around these features as they resurfaced following ongoing milling. Oscar argued that these manoeuvrings would increase production costs. By 2030, he concluded, “There wouldn’t be an *viable* [emphasis] peat left for energy purposes.” Along with Donal’s (1) contribution, Oscar’s testimony casts doubt over the extent of BnM’s emergent environmental ethos.

In the next section, the views of those indirectly associated with the peat sector are collected and analysed.

7.3 EXTERNAL STAKEHOLDER PERSEPECTIVES

The perspectives in this section arise from stakeholders working alongside, but not necessarily within, the peat industry. A diverse range of views were offered as to why peat extraction was wound down.

Alan (3) from Irish Rural Link worked for BnM in the 1970s and 1980s and advocated on behalf of turf cutters at Clara bog in Co. Offaly following its designation as a Special Area of Conservation. I asked him why peat production for energy generation was to end. He offered

three reasons: “I think we can take at face value, and we can accept and believe... that [Bord na Móna] are committed to reducing carbon emissions... they are always under pressure to do that. But I do think there’s a secondary reason, which is financial... a lot of the bogs are pretty much cutaway. It’s becoming commercially difficult, if not impossible to mine or to take the turf or the peat off the bogs.” Alan identified commercial challenges the company faced which may have also impacted on its actions: “Any product with peat... may not be saleable. If you buy a product like peat moss... if you’re worried about your own carbon footprint as a consumer, you might say... ‘I’m adding to my carbon footprint significantly’. So commercially, what Bord na Móna was doing was becoming less and less viable, but certainly the whole climate situation has progressed it.”

Gillian (18) is a peatland scientist. She offered a perspective similar to Oscar’s outlined in the preceding section: “If you go to a bog and start taking peat away, you’ll soon actually get to the bottom of it. So since the [1970s, 1980s], bogs have been running out. Bord na Móna couldn’t physically take more peat for fuel. Why? Because of the undulating nature of the under-bog. People... think it’s a table, flat – it’s not. It looks flat on the surface.... It’s the only way machinery can extract peat.” She continued, “If you hit mineral soil, your peat is spoiled. As soon as you hit mineral soil, [you] have to leave.” Hugo (27) said spoiled peat, that which contains high ‘ash’ content (e.g. stones, minerals), would cause damage to the Littleton briquette factory if it entered. This he said would incur repair costs.

Anne (11) worked for the Irish Peatland Conservation Council (IPCC), a charity that advocates for the preservation of Irish peatlands. She said BnM was halting peat extraction “Because the bogs have run out.” She went on to say, “They’ve greenwashed it. They’ve said it’s because of climate [change].” Anne was critical of the narrative surrounding BnM’s activities such as their marketing slogan ‘Naturally Driven’ and their use of the hare as their logo for Lough Boora Discovery Park (see plate 7.1). “You’d think they were a nature conservation group,” she quipped. I pressed her further on the reasons why production was ending. She responded, “It’s because the bogs have run out... Talk to people in Kilcormac and [they say] ‘Sure of course they have to stop cutting the bogs, there’s nothing left’.”



Plate 7.1 Signage for Lough Boora Discovery Park Anne was critical of Bord na Móna’s use of the hare on its Lough Boora Discovery Park imagery.

Graham (9), an ecologist at the NPWS, offered a similar view: “The peat’s gone mostly. It’s a finite resource – when it’s gone, it’s gone. So for a lot of the bogs, they’ve just come out of production because there isn’t any more peat left – that’s halting production.” He continued, “For some of the sites, the peat’s gone. Other sites... for logistical reasons, it’s not worth exploiting it – it’s just too far away.” Graham added that reduced market demand for peat briquettes and consumer concerns around climate change, especially from younger demographics, also played a role. This is a similar argument to the one presented by Alan (3) regarding the commercial appeal of peat products in the context of changing attitudes to peatlands (see 4.8.3).

Jason (10), board member in BnM from 2008 to 2011, alluded to the Public Service Obligation (see section 4.7.2) levy: “Right back in 2008, it was understood that [peat] wasn’t just a finite resource, but a finite activity – that it wasn’t capable of making money without independent support... those supports would have to fall away.” The removal of the subsidies would affect the viability of the peat-for-energy business. Jason felt that climate change was “a very small part of the consideration.”

I asked the small business owners dependent on the peat industry (see Chapter Five) why BnM was halting peat production. Gabriel (25.1) emphasised the finite nature of the peat resource while his wife Hillary (25.2) remarked succinctly, “Everything has a life.” Gabriel recognised

that the bogs are not renewable on a human timescale. Hillary added, “You have the environment, you have the pressure from the government. Like, everything is against...” Gabriel finishes her sentence, “...the burning of fossil fuels.” I asked her how she felt about this. She responded: “I think they’re right. Like, it’s endangering the [brief pause] atmosphere. We have to protect the world for future generations. If we’re doing wrong, we need to be corrected on it. Like, each generation, it’s a learning curve. The generation as is can see the damage that is being done. Well, [it] has to stop.” Gabriel seemed less sure. He offered the following viewpoint: “My take on it is... Fine, you know, let’s all do our little bit, but what we do on this little parcel of land called Ireland... how big an effect is that having? If we *stop* [emphasis] burning fossil fuels and driving cars and flying airplanes – if we all stopped all that, *what effect would it have globally* [slightly raised tone]?” Gabriel concluded: “Everyone has to do what they *have to do* [emphasis].... But, I think there are bigger fish out there that are not playing ball as much as we do.... say, America, India, China, Russia, places like that.” Publican Fergus (23) implicated ‘environmental pressures’ for the closure of the bogs and suggested that BnM are being “ordered” to stop production. He expressed frustration. He offered a similar perspective to Gabriel: “It’s a bit *ridiculous* [emphasis] to think that... the amount of peat that we have in Ireland, and the amount of emissions coming from that... it would be so tiny compared to what comes out of one chimney [inaudible] in China.” Häyrynen, Devery and Banerjee (2021) also encountered this narrative on their research. ‘Little Ireland’ they were told, pollutes nothing when compared to the United States, China or India for example (ibid: 82). However, Robbins (2012) identified the disproportionate impact that western societies have on the world’s natural resources. Although his figures is now somewhat outdated as they draw on data from 2005, Robbins revealed that the average American citizen produces twenty tonnes of CO₂ annually compared to just 1 tonne from the average Indian. Moreover, regardless of a given country’s size, each nation has agree to emissions reductions as part of international agreements which they must adhere to.

I asked Liam (12), the manager of the Lullymore Heritage and Discovery Park (LHDP) why he believed peat production was ending. He began by suggesting that peat is both a poor source of fuel for electricity generation and damaging to the environment. He stated that there is growing awareness about global warming and that peatlands have the ability to store carbon. He described peat production as “not a good fit anymore.” He continued, “I think most people, even the people that worked in it, they realise [this].” Liam’s perspective is one of rational

acceptance. At the same time, he was mindful of the benefits the industry brought to the area he lives in.

Dermot (34) was a BnM apprentice, community activist and turf-cutter. He said conservation and carbon emissions “played a major part” in BnM’s decision to stop peat production. He added, “As a state-funded organisation, they would have to take cognisance of that.” Cathal (35), a former turf-cutter, argued that the closure of the bogs was because of climate change. He said, “That’s the beginning and end of it. The government had to take action.” Gregory (33), a planner from Longford County Council, agreed. He said the decision taken by An Bord Pleanála to refuse planning permission to ESB West Offaly power station was made on the basis that burning peat for energy isn’t ‘sustainable’. More specifically, planning was refused⁴ in July 2019 on the following grounds:

1. The potential impact on a range of Special Areas of Conservation if peat harvesting was permitted to continue. Information supplied in the application had not assuaged planners of their fears for these sites.
2. The Environmental Impact Assessment and the planning inspector concurred that ongoing peat extraction and combustion would have deleterious effects on the climate and local water quality.
3. Transport of biomass through the nearby village may be a nuisance to residents.
4. The limited amount of information regarding the source of the biomass was concerning. A lack of specific detail as to its origin and the environmental impacts of its use could not be determined at the time of application.

In light of this decision, planning permission was not sought for the ESB Lough Ree power station following an internal review (ESB, 2019). The ESB accepted the ruling and neither appealed nor sought a judicial review. BnM would lose its largest customer as a result. The refusal based on biomass (point 4 above) is notable. BnM’s Edenderry power station in Co. Offaly is co-fuelled with peat and biomass (see plate 6.1), with the volume of the latter gradually increasing over time. Biomass has been considered a carbon-neutral energy source given its renewable nature. However, it is only sustainable if it is replanted following harvest. There are also concerns regarding the origin of biomass. BnM had once planned to source

biomass from North Carolina. Rick (20), a technician at ESB Lough Ree power station, suggested that Australian eucalyptus was considered as a fuel to co-fire with peat at the Shannon ESB power stations. He said, “When it came to getting planning permission for the transportation of that they ran into trouble.”

BnM is transitioning to more climate-friendly business activities as part of its *Brown to Green* strategy. Ending peat production is central to this new approach. Häyrynen, Devery and Banerjee (2021) argued that midland communities, although aware that the peat production would eventually come to an end, felt this happened too quickly. Those affected, “were not prepared for the suddenness of the decisions that were taken. The perception among communities is that this was taken without sufficient consultation or concern for the welfare of workers (ibid: 81).” Data collected in this study correlates with these findings. Charlie (29), a retired ecologist at National Parks and Wildlife remarked, “I think the *problem* [emphasis] with it is... happening very rapidly. It should have been happening in a much more kind of gradual, *organic way* [tone up]. So there’s that kind of... the abruptness of it.” Victor (21) said he had been informed by ‘a government minister’ that the ESB Lough Ree power station adjacent from his shop would close between 2028 and 2030. He acknowledges there had been a sense that it would close in 2025, or possibly even 2023. The announcement of its 2020 closure came as a surprise to Victor, who said: “We were all aware that the power station was closing, that it was coming to an end... But we didn’t expect it to come to an end in 2020.” What this indicates is that the peat industry ended quickly, albeit at the end of a long decline.

Cathal (35) expressed less concern about the sudden demise of peat extraction. He said that BnM were “winding down over years... It’s not like they’re closing down thirty year[s] ago. Everyone round about was employed by them, but now...It’s a matter of twenty or forty people in different spots around the country. It won’t have the effect that you’ll imagine.” Cathal’s contribution further supports the evidence presented in Chapter Five and Chapter Six that the peat sector has slowly declining. However, the loss of jobs as the peat sector closes adds to the long decline experienced by the sector. This raises significant concerns around justice.

7.4 SUMMARY

The end of the ESB’s peat-fired energy generation and BnM’s peat extractive activities came faster than expected. The sudden closure has had socio-economic consequences. Developing a

regional strategy for just transition has been reactive, rather than proactive because of the hasty demise of the sector. Given its slow decline over decades, more emphasis on what came after peat production should have been at the forefront on the state's considerations for midland regional development.

The findings in this chapter indicate that three factors ended the industrial peat sector. It is difficult to gauge the extent of public pressure over environment concerns on decisions made in government and BnM. Yet there is a strong perception amongst many of those interviewed that climate change has played a role in halting extraction of peat from bogs. Most explicitly, environmental concerns had a direct impact on the economics of peat via the EU Emissions Trading System (EU ETS). However, the wind down of peat production outlined in the BnM October 2018 announcement was preceded by cost-cutting measures, notably in the workforce (see 6.3). The economic argument made below is therefore a likely contributing factor for why the peat-for-energy business was wound down:

- Peat is running out;
- It is expensive to continue extracting near-exhausted supplies;
- The EU Emissions Trading System is making carbon emissions increasingly expensive to off-set.

The subsequent loss of the ESB as the primary external customer for milled peat exacerbated the situation. Both its Shannon power stations closed because:

- The ESB failed in its planning application to co-fuel West Offaly power station.

Moreover:

- The removal of the PSO levy from both Lough Ree and West Offaly would have implicated their long term economic viability.

However, if planning permission had been granted for co-fuelling the ESB's Shannon power stations they may have been eligible for REFIT 3 funding like BnM's Edenderry power station. Lastly, the peat extraction business was effectively halted because:

- Planning permission for production on peatlands over 30 hectares is required following the High Court ruling by Justice Garrett Simons.

In the context of climate change and boglands' carbon storage capability it is difficult to envisage such applications being successful.

7.5 CONCLUSION

This chapter examined the circumstances which lead to the wind down and then closure of peat-for-energy by consulting to a range of stakeholders. The subsequent findings indicate that the wind down in peat production was not necessarily linked to the climate concerns now espoused by BnM, but instead economic factors played a significant role. BnM is now expected to return a surplus to the exchequer according to George (32), an ecologist at the company. As bogs became increasingly exhausted after years of milling, the cost rose. The removal of subsidies from power stations that had made the industry viable further contributed to its decline.

The sudden end of production was initiated first by the refusal of planning permission for ESB West Offaly. Environmental concerns were part of the reason planning behind An Bord Pleanála's decision. Without its largest customer, BnM's peat-for-energy business was compromised. However, it was the decision by Justice Garrett Simons to set aside government sectoral regulations in 2019 that ultimately led to its demise. Even without the ESB purchasing its peat, BnM could have continued extracting peat for use in both its horticulture and briquette manufacturing businesses.

There are calls for a just transition for those affected by the closures. In the next two chapters, attention turns to the transition of turf-cutters affected by bogs designated as Special Areas of Conservation. When considering the futures of BnM and ESB workers and the communities that depend on the peat sector, lessons can be learned from the state's management of this transition.

Footnotes

¹ The term “cutover” in this instance is used to describe depleted peatlands. These are more often referred to as “cutaway” bogs. The term “cutover” is more commonly used to describe areas where peat has been extracted for domestic use either by hand (rare nowadays) or by a turf contractor.

² An area close to the shore of a waterbody

³ Friends of the Irish Environment Ltd. v. Minister for Communications, Climate Action and Environment, the Minister for Housing, Planning, and Local Government, Ireland and the Attorney General

⁴ An Bord Pleanála (ABP-303108-18) outlined the application for continued operation (and its associated ash disposal facility) and the proposed plans to transition from using peat as fuel to biomass. Proposed development (ii) describes the biomass used as being non-pelleted woody biomass, energy crops and manufactured wood pellets.

CHAPTER EIGHT:

RAISED BOGS, CONTESTED VISIONS

8.1 INTRODUCTION

In this chapter and the next, attention turns from the peat industry towards domestic turf-cutting, which has been subject to its own transition since the later-1990s. This provides important lessons when considering contemporary transition of industrial bogs. In the context of climate change, biodiversity loss, water pollution and flooding, pressure to halt extractive uses of the peatlands has been exerted by environmentalists, policymakers and the courts. This chapter speaks to the following question:

How have peat-for-energy transitions been managed in the past? What lessons, if any, can be applied to contemporary just transition efforts?

The transition of BnM's energy business and the impact on surrounding communities maintains a considerable presence in the public consciousness. Other transitions of peat-use are also ongoing. The horticulture sector is dependent on the use of moss peat as a soil conditioner. Supplies are running out as further extraction has effectively been banned following Justice Garrett Simons' ruling in September 2019 that planning permission must be granted for any peat production that takes place on a site above 30ha. Moreover, many people in midlands Ireland have used turf for home heating and cooking in for generations (see section 4.4). This traditional activity has been banned on 53 bogs designated as Special Areas of Conservation (SAC) under the EU Habitats Directive in order to preserve their ecological value.

This chapter examines turbarry rights and domestic turf-cutting. Later, it discusses the state's SAC designation process. This chapter reveals tensions between those with an interest in extracting turf and others who wish to conserve it.

8.2 AN INTRODUCTION TO TURF-CUTTING

The extraction of turf from bogs for domestic fuel continues in modern day Ireland, even as BnM itself has stopped peat production. The practice is woven into the social fabric of midlands

rural life. Instead of manually extracting the resource from the bogs in the traditional way with a tool called a *sleán*, most modern turf-cutters now employ a contractor to do it for them. While turf-cutters are no longer extract peat themselves, they nevertheless continue to be retain this identifier.

Every year in early April retired shopkeepers Gabriel (25.1) and Hillary (25.2) hire a contractor cut their turf bank, which is 5km from their home. Even with mechanised extraction, there is still a manual labour component to the turf-cutting process. The ‘saving’ of the turf Gabriel explained is done by hand: “It’s wet, so you have to... turn it or ‘foot’ it to dry it before you can take it home (see plate 8.1). Hillary said, depending on the weather, the saving of turf could go on into August. Gabriel added in an assertive tone, “Everything depends on the weather.” I asked them how long they had cut turf. Gabriel responded: “Early-Sixties; As long as I can remember we’ve been cutting turf.” Hillary’s family cut turf too, although not from their own a turf bank.



Plate 8.1 A turf-cutter’s shed Sodds of turf stored in a shed at a turf-cutter’s home. Many people living in the Irish midlands have strong economic and cultural ties to the practice of ‘saving’ turf.

Brendan demonstrated his strong ties to rural life. He is a member of parliament and commutes daily from Galway to Dublin to represent his constituents. “I’d be four hours every day in a car,” he said. Nevertheless, he remains engaged in rural working life: “I still work on the bog. When the bog season is on I go to the bog at 6 o’clock in the morning and drive a digger. I could come out from the Dáil at night and if we’re baling I jump up on a tractor. I don’t expect someone else to do what I won’t do myself, and never will.” Brendan described what bogs mean to him: “It’s our property, it’s our treasure and our goldmine, it’s our oil well.” He continued:

The bog has been a way of life for me from... a baby you could say, from knee-high, and I carried that on by putting my money where my mouth was and putting the machinery into it, and giving employment to other people. And I’m not going to let that... be taken away from me because it means too much to me, and to my family, and to, above all, to the people that have for years... elderly people that have been loyal, loyal people to both me and other contractors. It’s in our hearts... it’s like a possession, it’s nearly like... It’s like something you fought for...

Fred (7), who is a high-profile environmentalist, objected to the mechanisation of turf extraction by what he described as ‘commercial operators’: “They’ve got a very strong vested interest to protect their business. They’re making a lot of money. And they sell their turf to the local people. There’s no carbon tax on that, the way its structured at the moment – it’s basically not managed, it’s not regulated.”

Many people dependent on turf are of low means. In c.2012 Brendan took Jason, who was working for the newly constituted Peatlands Council, around the midlands so he could meet people impacted by the ban on turf-cutting within designated bogs. Jason described turf-cutters’ homes he visited on his journey: “There’s *a few of* [tone up] them we went into and there’d be a collection of buildings around the yard – couldn’t tell which were being lived in by man or beast – couldn’t tell the difference. And it wasn’t much different when you went inside them either. So that was a bit of a shock.” Jason added that these are “very, very traditional societies.” Giving an example, he said the people he encountered ate their dinner in the middle of the day. Reminiscing, he said, “those people really took me into their homes and hearts and they weren’t putting anything on.”

Subsistence use of natural resources tends to result in low environmental degradation (Robbins, 2012). Ian (5), a retired BnM surveyor, worked on the eventual NPWS/BnM turf-cutter relocation programme (discussed in more detail in Chapter Nine). He described the impact of turf extraction for domestic purposes: “The little farmers down cutting his bit of bog – he’d have a plot – if he was to cut his little bit of turf, and the rest of his family for a thousand years’ time, there’d still be bog left... That’s different from Bord na Móna – [it’s a] commercial outfit.” Fred (7) disagreed: “If we are going to address climate change, which we have got to do, we have to *stop all damage* [emphasis] to all bogs in Ireland.” Nevertheless, he conceded that small scale cutting isn’t a major problem: “Somebody cutting turf with a *sleán* is a tiny issue.” Fred grew up cutting turf himself and said: “My father thought this was a very important [activity] from his background as a child, that we should continue. So we’d cut our turf, and we saved our turf every year.”

There remains a danger that more raised bogs may become cutover by small scale extraction conducted *en masse*. As outlined in Chapter Four, half of the raised bogs of midlands Ireland were cutaway or reclaimed by the time BnM was founded (Feehan et al., 2008). Yet despite the finite nature of Irish peat, there are practical arguments made for its continued use. Brendan (30) was keen to stress the importance of fuel security. Furthermore, importing alternative fossil fuels to replace peat may simply move environmental degradation elsewhere. I put it to Fred that a ban on turf-cutting might unintentionally increase coal use, effectively displacing environmental ills. Fred argued that peat has a higher carbon output than coal, and also causes pollution, which impacts on the health of people. Anne (11), who campaigned to preserve bogs, had a similar perspective to Fred. She argued action was needed to mitigate climate change, and given their high carbon content, Ireland must act to reduce emissions from its bogs.

This section examined the practice and processes of turf-cutting. It identified the role of both turf-cutters and contractors in remaking the bogs. However, there are concerns that ongoing turf extraction will continue to damage the environment. A tension exists between those with interests in extracting from the bogs and those who wish to preserve them for environmental purposes. The value of those who wish to continue turf-cutting is explored next.

8.3 THE VALUE OF TURF-CUTTING

This section identifies how turf-cutters value the activity of saving turf. It is considered as a traditional and emotional relationship. Moreover, it has strong economic values for those who participate.

Section 4.8 identified how bogs are valued in a myriad of ways. Yet the perception of bogs is not fixed. Mike (14) used to work in senior management in the NPWS. He said some people had “drifted away” from cutting turf due to the effort required to save it. However, it remains a part of rural life as he explained: “You have a lot of people sort of embrace it as part of the rural cycle of seasons... A lot [of] older men seem to do it. [A] lot of *poorer* [emphasis] people were involved in it as well.” Ian (5) described the connection between turf-cutters and the bogs they worked as a “tradition”, that “came down through generations.” He continued, “People got bog and they felt it was their own. In a lot of cases it was an extension of the farm.”

The future use of bogs is an emotive subject for both conservationists and turf-cutters. Academic and environmental professional Jason (10) acknowledged the “very strong emotional relationship” that people have to turf. Brendan (30), a community activist and turf contractor described turf-cutting as “a tradition, a way of life and a heritage,” before noting the practice’s contribution to community cohesion. He described the bogs as “a meeting and a focus point for people down through the years, rearing their turf.” Trade unionist Nick (16) talked of going to a bog in the summer time. He said, “It’s teeming with people – no matter where you look there’s people – and all you can see is bottoms up all over the place with people doing turf.” He remarked, “That’s what keeps those places alive.”

Turf has historically been cut in Ireland for subsistence. Dermot (34) and Cathal (35) once cut turf from Clara Bog. Dermot represented turf-cutter interests to the state along with Alan (3) following the bog’s designation as a Special Area of Conservation. Dermot recalled going to work on the bog with his father as a youngster of about eleven or twelve in the early 1960s. Dermot’s family used turf for domestic cooking and heating. Dermot’s father would cut the bog with a *sleán* in the traditional way and Dermot would wheel it away in a barrow to the spread bank to dry. They continued in this fashion for four or five years until the process was mechanised in the mid-Sixties. Cathal said he too had spent much of his life on the bog, beginning when he was six or seven years old. Working with his father, he caught the turf as it

was cut, footed it and stacked it. Cathal still uses turf to cook and heat water. However, he no longer cuts or saves it. Instead, he purchases it.

Retired Walsh Island shopkeepers Gabriel (25.1) and Hillary (25.2) spoke about their turf-cutting activities. Gabriel said, “For generations [people] would have hand-cut turf for their own use... in their own premises, their own house. We still do it.” Gabriel has strong economic and cultural ties to the activity. He said, “It’s very hard for urban people to understand the relationship *we have with turf* [emphasis].” However, Hillary described the ‘rearing’ of turf as ‘hardship’. Cathal (35) also described turf-cutting as ‘hardship’, and added, “bogs always meant hard work.”

I explored turf alternatives with the Gabriel and Hillary. Economic factors were a central consideration for Gabriel. He explained that they have two forms of central heating in his house: oil and turf. He said: “If you don’t burn turf to heat your house, what do you do? You put in a... tankful of oil. Now oil is cheap at the moment, but oil can [increase in price] in a week’s time and you’ve no control over it.” According to Bridge et al. (2018: 241), “Energy consumers like a bargain.” Turf produced from one’s own bog can be very good value for money. Nick (16) saves three trailer loads of turf for his domestic fuel needs every year. The equivalent amount of oil he estimates would cost €2,000 per year. Turf he said costs him half as much. I asked Gabriel and Hillary if they could use timber as an alternative fuel. Gabriel said that they would need land to grow the timber to make it economically comparable to turf, given that they own a turf bank.

ESB worker Rick (20) is also a turf-cutter. He described the enjoyment of simply working in the bog. Like Gabriel and Hillary, his turf is cut for him by a contractor, and he saves it himself. Rick said that ‘most’ people in the area he lives and works (Lanesborough, Co. Longford) save turf. He uses the turf to heat his home. Discussing the labour process of saving his turf, he remarked, “I find [it] very enjoyable now at this stage. I just play some music and I’m just working away...” Nick (16) spoke of how bogs are an integral part of Irish culture and way of life. He remarked, “An ass and cart and turf in the back of it [was] the typical picture of Ireland.” Nick added that people had a social life on the bogs working with and helping their neighbours. Castree et al. (2004: 27) stated that wage labour is an inherently social activity. Labouring in the bog with others likely cultivates a similar form of social cohesion.

This section identified the socio-economic value of saving turf for domestic use. There are various ways in which people acquire access to the bogs they work. Turf-cutters often have ‘turbary rights’. These are different to fee simple land ownership rights. Navigating complex ownership arrangements alongside the socio-economic connections turf-cutters have to their bogs proved challenging for an under-resourced NPWS as it oversaw the transition of bogs deemed of scientific importance into Special Areas of Conservation (see Chapter Nine). These rights are examined in the next section.

8.4 RIGHTS OF TURBARY

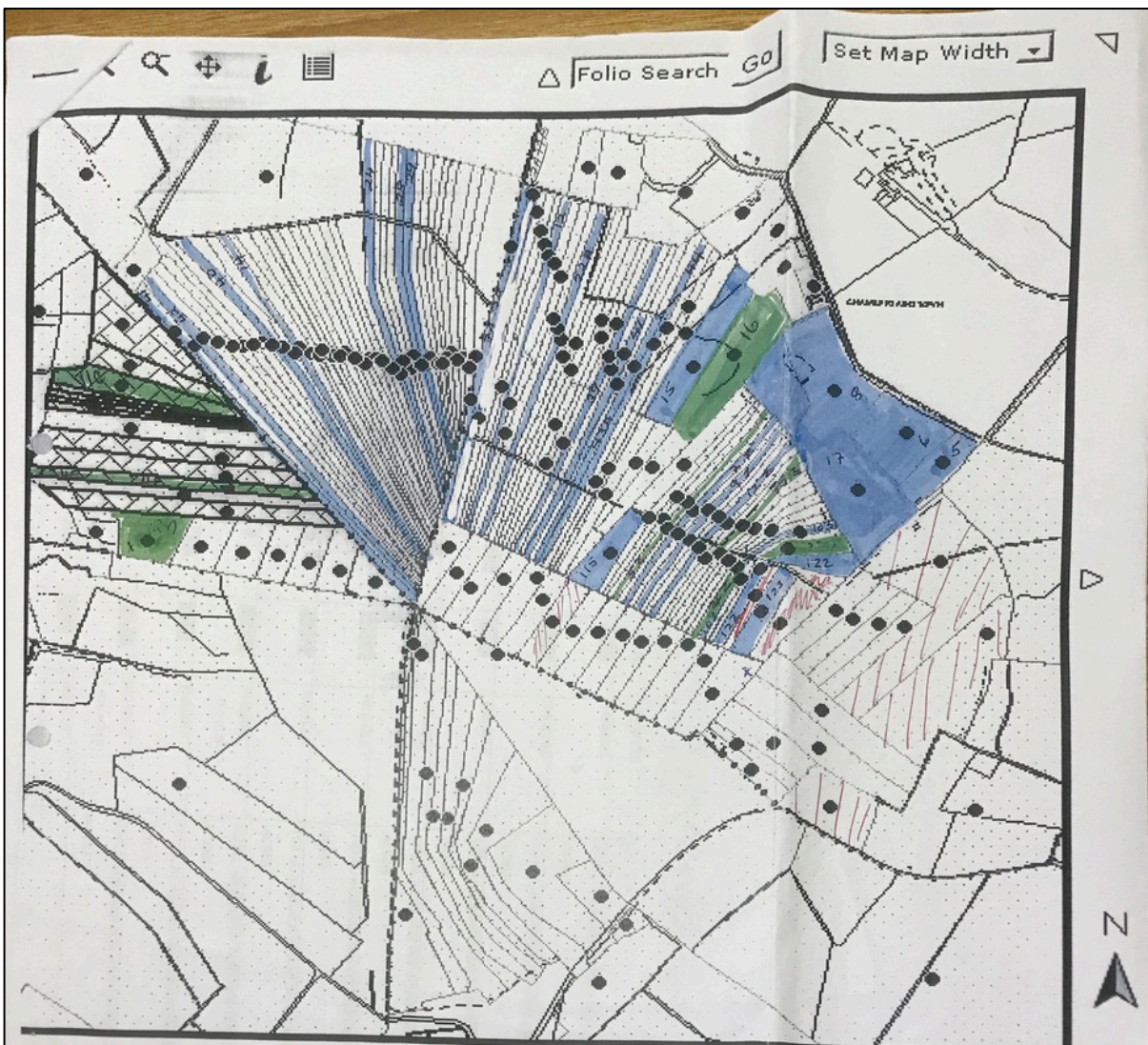
Turbary rights provide ownership over, and access to, bogs to extract turf for domestic use. Graham (9), an ecologist in the NPWS, said of turbary rights: “They’re strongly guarded by people who have them – they’re an important resource.” He spoke from first-hand knowledge as his own family held them.

Turbary rights could be purchased, inherited, rented or granted. Peatlands of all sizes can have multiple owners. Scragh Bog, at just 15 ha in size, had nine owners at one time (Cross, 1990b). This presents a challenge when conservation efforts are initiated. Anne (11) said, “In conserving the raised bogs, a big issue is turf-cutters. Most of the raised bogs that are earmarked for conservation are in private ownership. The way it used to be you bought a house – you got a turf bank with it. And that still exists.” Anne described the ownership arrangements as like “a packet of biscuits on its side – everybody owns a tiny, tiny piece” (see map 8.1). She added: “On a raised bog, there could be 300 or 400 owners... Some of them are dead and gone, others are very active. Others are ‘peat pirates’ who come in and they know ‘Johnny’ is no longer around – ‘I can cut his bank’.” Ownership of bogs is therefore not always clear. Cross (1990b: 186) described navigating ownership as a “major social problem.” Alan (3) remarked that there are tracts of bogland in Ireland where ownership is not known. This proved to be a challenge for the NPWS when interacting with turf-cutters on bogs selected for conservation.

In their efforts to designate and conserve bogs used for turbary, the state had to negotiate a multitude of often unwritten or unrecorded claims to these cultural landscapes. When managing this transition, Mike (14) said the NPWS “didn’t want to get into a purchase scheme.” This was for two reasons. First, the state would not provide the finances and second, many turf-cutters did not have clear title over the land they cut. Some people he said had been using a

turbary right that had expired. Moreover, there are different types of turbary rights according to Mike, with some being for a single generation, and others longer. These could have been provided by the Land Commission, BnM, or may have been associated with a domestic dwelling. In general, they are not saleable as they are in Mike's words "quite a restricted property right."

Brendan (30) offered a different perspective over bogland ownership. He said that the state had ownership of 92% of proposed SAC bogs. He described how the state owned the middle, while the edges were owned by private citizens. He said that the latter were in effect "biting at the toes of an elephant." Ownership at Clara Bog followed this model with BnM at one time owning the centre with turf-cutters owning and working the periphery.



Map 8.1 Turf bank ownership at Girley Bog, Co. Meath The slim lines delineate the turf plots. This illustrates the complexities of bogland property rights. Supplied by Anne (11).

Outside of turbary rights, people can purchase peat extrusions. Rick (20) does not own his own turf bank, but saves turf in much the same way as those who do. He explained: “There’s people who are producing cut turf – sections, and you buy a section... The turf is laid out on the ground, and it’s 80 metres long... And you just lift them, dry them and bring them home.”

This section discussed turbary rights. It illustrated their complexities and alluded to the challenges the Irish state faced in conserving bogs with multiple owners. Turf contractors are important stakeholders in the turbary bogs and their role is examined next.

8.5 THE ROLE OF CONTRACTORS

A central component in the practice of domestic turf-cutting are the contractors. Mike (14), former senior manager at the NPWS, described the role of contractors. First, they use an excavator to cut peat from the high bog and then deposit it into a machine called a hopper. This mixes the peat. Once the peat is processed the hopper extrudes it onto an area of cutover bog called a spread bank. The hopper can be self-propelled or towed by a tractor. It is left to dry for a period of time. The turf-cutters then ‘foot’ (stack) the turf themselves.

Brendan (30) estimated there are between 350 and 400 turf-contractors in Ireland. Their work is seasonal, lasting about six weeks and is weather dependent. Extraction begins at different times of the year depending on the geographical location. Brendan said frost is a concern as it can damage turf and turn it brickle. Brendan works in counties Galway, Roscommon and Mayo. He explained that on the western seaboard cutting can begin before St Patrick’s Day, the 17th of March, as frost is not as prevalent there at that time, whereas in the cooler midlands, turf-cutting does not normally start until the first or second week of April. Brendan explained that turf-cutting is part of a combination of other rural activities he is engaged in, particularly within the agricultural sector. He provides a range of services to farmers from baling hay to ‘topping’ pastures, whilst farming himself on a small scale. The provision of a mix of rural services provides a living for Brendan and his family. However, “If you take one of the legs of the stool away,” he warned, “it starts to... unsteady the ship.” Moreover, Brendan expressed his loyalty to his customers, cutting small bogs that “wouldn’t [be] as viable to go into them. But you have to always remember that when you started off, those people... gave you the work and you’ve to stick with them.”

Significant capital expenditure is required to operate as a turf contractor. Brendan said that the investment into a full mechanised turf-cutting ‘outfit’ could cost as much as €250,000, excluding a digger. I contacted Pauric Fitzpatrick Manufacturing (PFM Machinery & Fabrication) Ltd. based in Clonsast, Co. Offaly for a quote. The company confirmed that a self-propelled hopper machine would cost €350,000 excluding VAT. A digger is separate and costs €35,000. A cheaper and more popular turf-cutting option they explained was the tractor-drawn equivalent, which carries a bigger load. In this combination, a tractor costs €60,000, a towed hopper €75,000 and a digger €35,000. The hoppers are manufactured by the company itself. A hopper alone could be purchased and used with machinery already owned, therefore the outlay could be as low as €75,000. Whilst this is significantly less than the initial cost quoted by Brendan, it remains a substantial outlay. With a year’s supply of turf costing between €300 and €500, this would equate to approximately 200 banks cut before the hopper was paid off. This figure does not include other associated costs, such as fuel and the use of other machinery. Brendan added: “You could get a breakdown with the gear that’s involved. Bog is *tough* [emphasis] on machinery... You could get a breakdown any given day between €1,000 and €15,000 in one go.” Given the large capital investment it is understandable that turf contractors have campaigned to protect their business following the restrictions placed on a number of designated bogs. Concerned contractors would form a group to coordinate their campaign against the displacement of their customers from such sites called the Turf-Cutters and Contractors Association (TCCA). It would quickly become a powerful and influential political movement. Brendan, a leading figure in the organisation, said the TCCA was established “to defend the right of ordinary people, but also to help the contractors.”

Mike (14) was critical of what he viewed as a largely unregulated economic activity within rural Ireland. He alleged that turf contractors engaged in indiscriminate cutting: “They had *generally no huge regard* [cautious tone] for whether they had permission to cut or not. Often, I was told, what they do is they’d come in to a face bank, they’d cut it all, and then they’d go to the people who owned the face bank and say, ‘Listen, I’ve cut your turf, so give me three or four hundred quid’.” Mike said if the owner of the plot did not pay up, the contractor would offer the turf to other people for sale. He described the situation as ‘lawless’, and also noted that there was often a lack of understanding as to who owned what in the bogs: “There’s no markings on a bog, so you don’t know really where somebody’s plot is. And people don’t know – they don’t know themselves really where it is.” Mick concluded by describing a form of ‘ownership by usage’ – those who are using the bog end up ‘owning it’, similar to the use of a

right of way. I asked Brendan (30) if he sought permission from people to cut their bog, or if he cuts it and then offers it to them as Mike described. Brendan explained that there could ‘two or three’ different contractors working on a bog, and their owners have a choice who they make their order with. He said, “We know the turf banks going down through the years... And all they have to do is ring us up and... we go in and we cut it for them.” He added, “I’ll tell you one thing – If I went into someone’s bog and I went to grab a bit in from *the next one* [laughing tone], I’d soon be told to pull back.”

In this section, the role of turf contractors was identified. Their work reduces the amount of manual labour required to save turf. Furthermore, turf extraction helps support a livelihood which is based around seasonal, rural activities. In the 1990s, a series of bogs identified as being of high scientific importance were designated for protection under the European Union’s Habitats Directive. This threatened the activities of both turf-cutters and contractors. This was administered by the NPWS. In time this would lead to conflict over the bogs. The NPWS’s role in designating bogs is examined next.

8.6 NATIONAL PARKS AND WILDLIFE SERVICE

In this section the role and challenges faced by NPWS is discussed. Charlie (29) is a retired NPWS ecologist. He described his previous employer as Ireland’s statutory nature conservation organisation. As part of its remit, the NPWS advises the government and implements nature protection laws. Charlie’s successor, Graham (9), added it has “a wider role in terms of wildlife protection.”

The NPWS is involved in various international conventions including Ramsar, Berne and the Convention on Biological Diversity. It has oversight of Special Areas of Conservation (SACs) and Natural Heritage Areas (NHAs). SACs are designated under the EU Habitats Directive. NHAs, according to Graham (9), are national designations given to bogs not quite at the standard of SACs, but which are nonetheless deemed worthy of preservation. He explained NHAs are designated under national law, but that this is informed by ‘general’ commitments made by Ireland’s adoption of the Habitats Directive. He added that demarcating sites as NHAs was more ‘efficient’ than designating them as SACs.

The modern day NPWS can trace its lineage back to the 1970s. Former ecologist at the organisation Charlie (29) recalled its history. The Wildlife Act 1976 provided for a “statutory foundation” which enabled the establishment of nature reserves. A body that could action this was required. This role was given to the Forest and Wildlife Service. The organisation later split in 1989 following the forestry department’s decision to become a semi-state commercial operation. This new business was called Coillte (N.D.a). The NPWS later emerged to continue nature conservation. Its functions were absorbed into Dúchas, which also had oversight of built heritage following its establishment in 1997. Dúchas was abolished in 2003 (Sheahan, 2003) and the NPWS re-emerged. The state body has faced considerable challenges throughout its history as Anne (11) explained:

[The Irish Peatland Conservation Council] work with a very, very *weak* [emphasis] National Parks and Wildlife Service. They’ve always been the underdog in any department they’ve been in – underfunded, under-resourced, losing interest *rapidly* [firm tone]. They’ve always been like that – so that’s why we’re around. We should have been gone years ago, but we’re around because we’re their watchdog and they’re not doing what they should do.

Conversely, Brendan (30), a turf contractor, argued that Irish environmental groups were overfunded by the state and were using European law to “destroy heritage [and] traditions.” Moreover, he is critical of environmental oversight and the views of ‘experts’. Brendan’s concerns echo political ecology debates surrounding ‘whose knowledge counts’. He accused the ‘environmental lobby’ of damaging employment in Ireland, before adding:

We are [emphasis] environmentalists in my opinion, in the countryside. *It’s us* [emphasis] that look after the *land* [emphasis]. It’s us that mind the heritage, the traditions, and it’s us in rural areas... it’s the *farming* [emphasis] community that is the best keeper and the best environmentalist of all, not some blown up person in *Dublin* [emphasis] that thinks they can look down and tell us, or decide for a weekend that they’ll go out for a drive and they’ll tell us what to do. That ain’t going to work, as simple as that.

I presented the case to Brendan that Ireland once had vast boglands, and that only a fraction remained intact and peat-forming. He countered by saying that this wasn’t the fault of the ordinary people, but was a decision made by the state. He is correct in his analysis as BnM had been established by the government to extract peat from Irish bogs on an industrial scale.

Brendan played down the impact that domestic turf-cutting has had on damaging bogs, arguing a single acre can last a family 240 years. Yet the ongoing small-scale degradation of bogs for turbarry takes place in habitat rare at an international level. Moreover, raised bogs have disappeared quickly. This is examined in the next section.

8.7 VANISHING BOGLANDS

Charlie (29) began working in the Forest and Wildlife Service (FWS) in 1974. He recalled meeting Matthijs Schouten, a Dutch researcher who was studying Irish bogs in the late 1970s. Schouten had been alarmed at the rapid disappearance of peatlands that was occurring between his fieldtrips to Ireland. Charlie reflected on his response to Schouten's growing concerns: "I thought he was being overly dramatic, because like everyone in Ireland at the time, I saw bogs as sort of a... almost an endless resource." Charlie's view soon changed: "When we started looking at the bogs and the condition of them, myself and another colleague at the time, John Cross, became quite concerned." The two men produced a bog conservation paper in 1984 for the International Peat Society meeting. Charlie said it was: "...the first *really* [emphasis]... substantial set of... peatland sites that had been identified for conservation." Charlie added: "That basically came out of... our dealings with Matthijs Schouten and understanding that we were actually in a fairly critical situation."

Charlie recalled how John Cross built upon their survey work to produce *The Raised Bogs of Ireland* in 1990. Cross (1990b) said the surveys were taken in response to two factors. The first was the growing awareness of the importance of bogs. The second was the realisation that they were rapidly disappearing. The eventual findings (Cross, 1990a) proved contentious. "It was objected to by our forestry colleagues," according to Charlie, "because they were doing a lot of planting on blanket bogs at the time, and they didn't want any kind of limits put on their activities." He continued, "So the document disappeared for a few years, but we kept on quoting it anyway, and now it's effectively been re-established as an official NPWS document."

In the late-1980s Charlie worked with Schouten and other colleagues to purchase a series of Irish bogs, which were then handed over to the Irish state. A Dutch-Irish raised bog research project was also established. Research began on both Clara and Raheenmore bogs in 1989 and concluded in 2001. The findings were published in an edited volume called *Conservation and*

Restoration of Raised Bogs (Schouten, 2002). Charlie summarised the key findings from this study. He said they illustrated the connection between the hydrological state of bogs and the vegetation that developed thereon. He noted that a bog would dry out if its slope was greater than 30cm over a distance of 100 meters. Later, it was discovered that the slope could be more than 30cm if the peatland was further west where rainfall was higher than in the midlands. These topographic, hydrological and botanical findings helped inform decisions on where it was possible to re-establish peat-forming habitat on bogs which had previously been degraded. The identified landscapes would also need legal protection.

This section described the realisation by officials that peatlands were not an inexhaustible resource, but finite in nature. The best remaining examples required protection. Legal mechanisms would enable this. However, as the next section reveals, this process was contested.

8.8 DESIGNATING SITES FOR CONSERVATION

In this section, the process and challenges of designating peatland sites for legal protection are outlined. This has proven to be difficult at times, and errors were made. However, from this process emerged a range of sites now valued for their contributions to biodiversity, amenity and carbon storage.

The EU Directive on the Conservation of Habitats, Flora and Fauna, more commonly known as the Habitats Directive (Council Directive 92/43/EEC), was agreed in 1992, became law in 1994 and was adopted in Ireland in 1997 (National Parks and Wildlife Service, N.D.a). The Habitats Directive, together with the Birds Directive (79/409/EEC, and in 2009 Directive 2009/104/EC), form the cornerstone of European Union biodiversity conservation: Natura 2000. In Ireland, the National Parks and Wildlife Service (N.D.a) is tasked with implementing and monitoring conservation activities and reporting on earmarked habitats' respective status to the European Commission every six years.

In his role at the NPWS, Charlie (29) was responsible for designating rivers, lakes, turloughs, lagoons, fens, flood plains and raised bogs as Special Areas of Conservation. He also assisted with the designation of blanket bogs. Moreover, Charlie later worked designating Natural Heritage Areas (NHAs). In outlining the site selection process, Charlie said that designating a

lake for example, would be straightforward if it was found to contain a rare species. Bogs, he said, were more difficult as “you were dealing with such heavily damaged systems, which you might or might not be able to conserve.” Charlie described the rules of thumb he employed for site selection: Any bogs below 60 ha would dry out in time and were therefore unfit for conservation. It was also important to have a range of bogs, subject to differing rainfall and elevation for example, in order to ensure diversity. Charlie noted the extant floral variation between raised bogs further east (True Midland sub-type) compared to those in the west of the midlands (intermediate sub-type). This needed to be represented in the eventual portfolio of protected sites. However, this presented its own challenges as Charlie explained: “Sometimes you had to take a less good quality site, because it was further *east* [emphasis].” Variation was essential in order to preserve a representative example of the differing ecologies, and with many of the eastern bogs in industrial production it was important to preserve the few that were available. The designation of some bogs led to a long, protracted conflict between the state and rural communities which remains ongoing to the present day. Reflecting on his experience of this, Charlie said: “If you don’t prepare people for what is coming, [for] what needs to be done, and build up support for that, then you’re going to fail.” He offered another explanation for the difficulties that eventually arose: “In Ireland... the importance of ecology has never been *seriously* [emphasis] considered... at the political level. So there’s been no *effort* [emphasis] to actually try and build up support for that. *So we had* [tone up]... a lot of problems, especially for the raised bogs, and I was involved in that to try and protect them from turf-cutting.”

The SAC designation phase started in the mid-90s. The was flawed Mike (14) said, because “the early designation process was down the barrel of a gun... It was the threat of infringement proceedings... And we offered these [bogs] to the European Commission as proof of our compliance with the Habitats Directive.” Nevertheless, those impacted had the right to appeal a given aspect of designation (i.e. a part of a site) to the SAC appeals board. Charlie described his frustrations at how this unfolded: “We would have to send in our submissions as to why [a site] shouldn’t be excluded [from designation]... *And a lot of the time we lost* [tone up]. And even sometimes when it was *stunningly* [emphasis] obvious that [a given site] shouldn’t be excluded, it still was excluded.” I asked Charlie if the difficulties in nature conservation impacted upon him personally. He replied: “It was... very heart-breaking at times to see sites you knew should have been protected being destroyed. A lot of this destruction though wasn’t a one off thing – it was death [by] a thousand cuts... A lot of people got burnt out by that...”

After a while they felt helpless and hopeless about doing anything about [it]. I did... I suffered stress, definitely, as a result of it.”

The NPWS made errors in its designation of sites. Charlie’s vision on what could and should be conserved changed when considering Abbeyleix bog in the late-2000s. When presented with the site Charlie admits to initially dismissing it as he considered it a worthless BnM drained bog. He said: “When I was designating [SACs], any site that had been drained, completely drained, I wouldn’t consider... Because the potential for restoring it was in my view, very, very low.” The community living around the bog pushed back and the then environment minister John Gormley instructed Charlie to get involved and assist with restoration efforts. He acquiesced and the eventual outcome changed his mind as to what was possible in the context of bog restoration. For Charlie, a particularly compelling aspect of Abbeyleix bog is the presence of carr, or wet peatland forest. He explained, “If it’d just been the raised bog itself I wouldn’t have been particularly impressed. But when I went down there, you have all this wet woodland... around it which... would have been the original kind of habitat transition onto the high bog.” Charlie outlined why this is so rare and important. Turf-cutters he said, “...start on the edge of the bog, draining and cutting.” This damages the fringes of the bog, including the natural carr. He continued, “There’s only about four or five places in the country that actually have *any* [strong emphasis] of that [left]. That was the biggest area of that kind of habitat *in the country* [tone up].” Charlie has been involved with the Abbeyleix bog project ever since.

The initial offer of 32 raised bogs to the European Commission in 1997 for designation under the Habitats Directive was not deemed adequate and further negotiations were entered into. Mike (14) recalled that a tranche of 21 was offered in 2002/3. Moreover, 75 Natural Heritage Areas (NHAs), lower quality bogs in Mike’s words, but nonetheless ones worth protecting, were also designated following an infringement action taken against Ireland. These however were not associated with the Habitats Directive, but instead the EU’s 1985 Environmental Impact Assessment Directive (85/337/EEC). Mike recalled how this directive was connected with Ireland’s planning permission system. The EU, he said, did not have faith in Ireland’s ability to govern its bogs through its planning system. As an alternative, the chosen bogs were put into the NHA system in order to protect them. Mike admitted that no significant conservation efforts were put into managing these bogs. Their designation was relatively straightforward he explained as some were already under state ownership, while others were

not suitable for turf extraction; they were “low-hanging fruit” and “got Ireland off the hook for a couple of years” he recalled.

This section presented an account of the designation 53 Irish raised bogs as Special Areas of Conservation, and later, Natural Heritage Areas. This was not a straightforward. Errors were made in designating sites for protection. In the next section, further challenges faced by the NPWS following the designation process are outlined.

8.9 CHALLENGING TIMES

Upon commencement of his role in senior management in the NPWS in 2008, Mike identified two challenges. The first concerned judgements made in the European Court of Justice against Ireland relating to environment and planning law infringements. The second related to the organisation’s available resources (which Anne identified in 8.6). I asked Charlie why the Irish state was not complying with European Union directives. He responded: “Just because it was easier not to comply. If there’s no kind of *buy-in* [emphasis] by the political system into the need for environmental protection.” Addressing matters of resourcing, Mike said:

It was 2008, coming into a period of huge turmoil within the public service, within civil service, within government – resources were very, very tight; both human resources and financial resources were being cut at the time. The National Parks and Wildlife Service *had always gotten a bad deal* [says slowly, choosing words carefully] in terms of the resources that they were allocated compared to the task that was given [to] them.

Both Charlie and Mike identified a lack of political will around environmental oversight. Mike continued to explain how the NPWS had to operate under-resourced dealing with complex matters in an effort to keep Ireland “out of trouble.” He described this as “very challenging.” He noted that Ireland’s record for compliance with environmental law was “very, very poor” and possibly the worst in Europe at that point in time. He explained: “We had a huge number of cases... findings against Ireland. And this went across the gamut of environmental law. So it included water management, waste management... Environmental impact assessment was a huge failure... So loads of findings against Ireland, loads of *trouble* [emphasis].” The management of bogs was a particular challenge. Mike said there was no regulation of peat extraction in Ireland at the time beyond a “semblance of regulation” at BnM, a reference

perhaps to its IPC licence. Mike added that planning law did not make sense when it came to peat extraction, with the result being the planning system “basically ignored bogs.” This was eventually dealt with in the High Court when Justice Garrett Simons decided that extraction from boglands above 30 ha was subject to planning permission.

Alongside legal wranglings with the European Commission, the NPWS had to contend with growing acrimony over bogland designations at home. Charlie met with those impacted and alleged he was sometimes subjected to abuse. Disagreement also occurred within decision-making bodies - Charlie alluded to misgivings from his own colleagues - and even within the turf-cutting movement itself. Furthermore, the environmental movement took issue with the actions of the NPWS. Anne (11) was highly critical of its actions pertaining to the transition of domestically-cut bogs into Special Areas of Conservation. She said: “This mess with the raised bogs – really, it’s entirely their fault. They went and designated sites without telling people. That’s the bottom line. And you do that – everybody’s against you for ever more.... That’ll never be forgotten.” Anne continued: “They went out and surveyed the bogs, and then they designated them without public consultation... And then they tried to consult afterwards, and everybody’s back was up. And that’s where the whole debacle has arisen.” Cathal, a former Clara Bog turf-cutter, criticised the SAC designation process in a similar fashion. He said the state’s communications had been poor, and argued that they should have taken more time to engage with the bog’s users. Cathal argued that the state should have provided education to the public on why bogs were earmarked for preservation. He was keen to promote a cooperative approach: “It’s not a ‘them and us’ situation – we’re all in it together... If we can come to a happy outcome with no... whinging and crying about it, it would be much better.”

Poor consultation with stakeholders was not exclusive to bog conservation. Cathal has land in an esker SAC. He recalled how it was demarcated seemingly ad hoc without consultation of locals and without the provision of information rationalising its preservation. I asked him how this made him feel. He took a deep breath and responded, “Makes you feel a fool. People come down and tell you that you’re an SAC and they never said to you *why* [emphasis] you’re in it.” The esker SAC designation impacts on Cathal in that he must not reclaim certain parts of his land or cut down trees. He said that he does not mind this so long as he is compensated for the inconvenience. I asked if he was compensated. His response: “Not really.”

8.10 CONCLUSION

This chapter engaged with two contested visions for raised bogs: extracting peat for domestic use and conservation for environmental purposes. It began by describing the activities of turf-cutters and contractors. Winning turf from privately-owned bogs is a valued activity in much of midlands Ireland. Moreover, it supports the livelihoods of contractors who provide a range of other services. However, the extraction of peat for domestic heating in many cases degrades rare habitat. Raised bogs deemed worthy have been designated as Special Areas of Conservation by the NPWS. Turf-cutting has effectively been banned in these bogs. This has proven controversial.

In the next chapter, the case of Clara Bog's transition into an SAC is discussed. Furthermore, the conflict over turf-cutting that erupted across the midlands in 2012 is examined. Efforts to ameliorate this acrimony are outlined. The findings that arise are important as they can inform future bogland transitions.

CHAPTER NINE: LESSONS IN TRANSITION

9.1 INTRODUCTION

In this chapter, the Irish state's implementation of the Habitats Directive Annex I raised bogs as Special Areas of Conservation is examined. It begins by discussing the transition of Clara Bog from turbary to protected site. This chapter further addresses the question:

How have peat-for-energy transitions been managed in the past? What lessons, if any, can be applied to contemporary just transition efforts?

Clara Bog is a notable example of peatland transition. Former NPWS senior manager Mike (14) recalled that turf-cutters across Ireland had been disparate factions. The Clara Bog turf-cutters he said were the first association where a resolution was eventually found. However, Clara Bog's model had its limitations. This chapter identifies these and outlines the continued efforts made by stakeholders to resolve the impasse between the state and those who wished to continue exercising their rights of turbary.

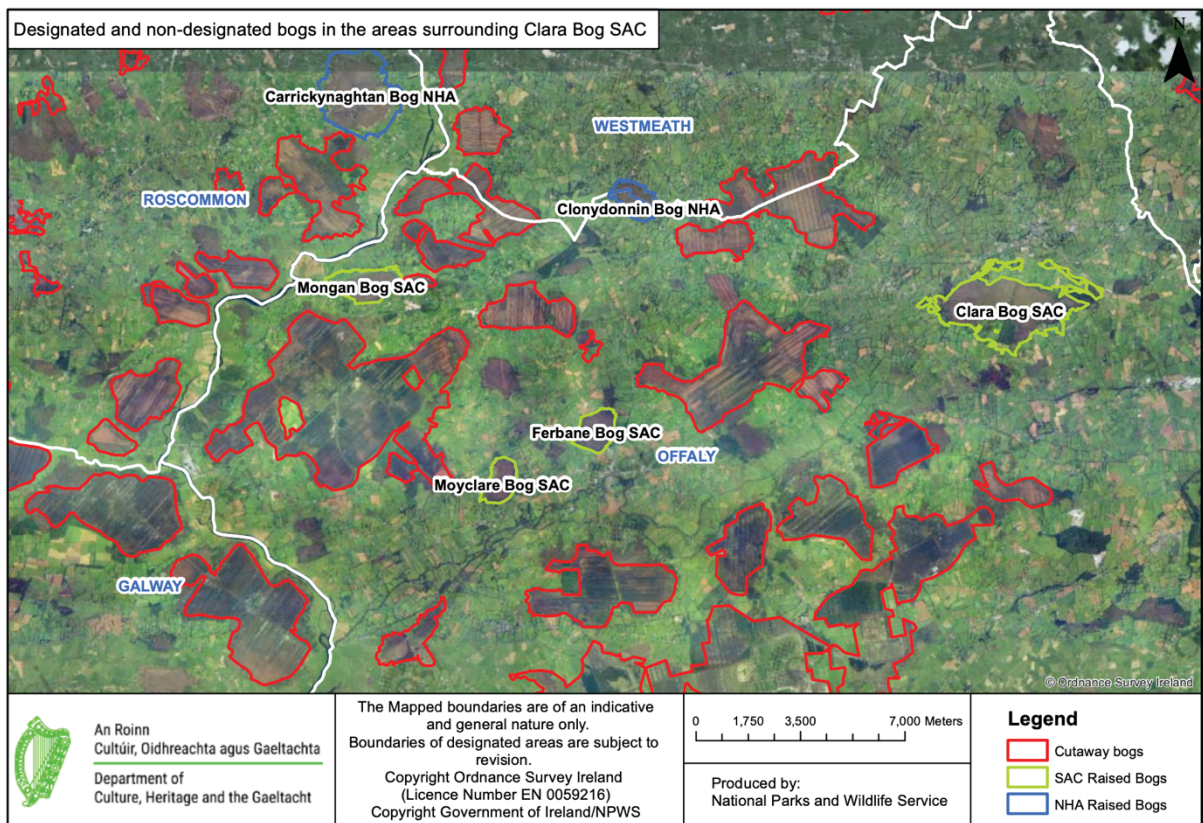
9.2 GEOGRAPHIC ASPECTS OF CLARA BOG

The chapter begins by reviewing the geography of Clara Bog SAC. It begins by describing its physical characteristics.

9.2.1 Physical geography

Clara Bog, known in the past as Lough Roe, is the largest relatively intact True Midland Type raised bog (The Living Bog, N.D.), and the largest raised bog more generally, left in Ireland (Foss and O'Connell, 2017). Bellamy (1986: 48) described it as "one of the great lobes of the Bog of Allen", much of which is now cutaway (see map 9.1). The bog was bisected by a road (Clara to Rahan) creating two disparate sections: Clara Bog East and Clara Bog West. It is not known when it was constructed. Following their mapping analysis, Crushell et al. (2008) estimate it was built between 1778 and 1809.

Clara Bog has been significantly altered by human activity and is now less than half its maximum extent of over 1,000 ha at the beginning of the nineteenth century (Crushell et al., 2008). The National Raised Bog Management Plan 2017 – 2022 (2018) noted the area of high bog at Clara in 2012 was 436.5 ha, a reduction of 9.2 ha since 1995. According to O’Connell (1987b) the bog was 665 ha in size in the mid-1980s, although it is not clear if this figure included cutover areas. Van der Molen and Wijstra (1994) also described its size as 665 ha. However, Bellamy (1986: 163) estimated its size to be significantly less at 520 ha.



Map 9.1 Clara Bog SAC in the Bog of Allen Clara Bog SAC is located to the east of the wider BnM Boora group of bogs, which are themselves part of the larger Bog of Allen complex. Many are now cutaway. Source: National Raised Bog Management Plan 2017 – 2022 (2018)

O’Connell (1987a) identified Clara Bog as having the last complex raised bog soak system in the state, which Cross (1990b: 179) described as ‘remarkable’. Soak systems are small bog lakes or ponds surrounded by mineratrophic vegetation (Van der Molen and Wijmstra, 1994). Clara Bog has several soak systems. Two exist in Clara Bog West: Shanley’s Lough in the eastern centre and the Western Soak towards its west side (Regan, 2013). The largest eastern-side bog soak is called Lough Roe (plate 9.1). Once an open lake, it has subsequently become overgrown, and water is no longer present at the surface (Connolly, 1999). In recent decades,

ombrotrophic (raised bog) floral species have pushed out minerotrophic (fen) species due to human influences, and could disappear without adequate intervention (Crushell et al., 2006). Lough Beag lies to the south of Lough Roe and similarly contains no open water, having become overgrown in the past (Connolly, 1999).



Plate 9.1 Lough Roe Clara Bog SAC is notable for its soak systems. The above image is of Lough Roe on the eastern side of the bog. It is less than a hectare in size (0.8ha) according to Connolly (1999). Note the striations in the landscape. These are the remains of drains cut into the bog by BnM between 1983/4.

9.2.2 Human geography

Turf-cutting and reclamation began in Clara Bog from the early nineteenth century (Crushell et al., 2008). This practice became organised in time. Turf-cutters Dermot (34) and Cathal (35) recounted the use of the bog through time.

Cathal's familial connection to Clara Bog goes back decades. His grandfather was a trustee of the bog and was responsible for administering turf plots. Cathal recalled the process: "If you wanted a bank to cut turf you'd go up to my grandfather... and ask him for a plot... First he'd ask you how much you wanted." Cathal said the banks were demarcated in the Irish measurement system; prospective turf-cutters might request either one or two 'perches'. He explained: "A perch in English measurement was five and a half yards, but in Irish

measurement it was seven yards. And the bog was always given out in Irish perch – seven yards... He'd go out to... the bog and he'd step out seven yards or fourteen yards, and that'd be yours.”

Tenants paid for their bank every year. Cathal recalled that local landowners, the Goodbodys and the Baileys, were among those with ownership of Clara Bog (confirmed by Crushell et al., 2008: 106), while and those with land on the nearby esker also possessed banks of turf. Dermot's (34) father had inherited a plot of turf on the western side of Clara bog, but this he recalled was of low quality: “Unfortunately [our] peat, according to my late father, was so poor that if you put it on the ass and cart to bring home, by the time he'd get home it would have blown away.” The family instead used the space for cutting timber as an alternative fuel source. The family's energy needs were eventually met in time through the acquisition of a turf plot on the eastern side of Clara Bog. Dermot recalled how his family came into ownership of it. It began with the Land Commission purchasing peatland on Clara Bog East. 31 tenants entered into a rental purchase agreement with the Land Commission for the new turf plots created there, whilst one person bought their plot outright. Each plot was 2.3 acres in size – just under a hectare. Each was made up of high bog, from which turf was cut, and a spread bank, where it was laid out to dry (see plate 9.2 for examples of regenerating biodiversity in the latter). Dermot remembered paying the annual fee for the plot, £2 and ten shillings, at the Land Commission offices in Tullamore. He said the purchase of the plot was complete in about ten to twelve years. His family began working in the new plot in the early 1960s. Dermot's father cut the turf in the traditional way with a *sleán* while Dermot operated a barrow to move it. Turf extraction was mechanised from the mid-1960s onwards, with Dermot's father arranging for a contractor with a sausage machine to extract his turf before the family saved it thereafter. Dermot estimated that by the late-1960s mechanisation had moved on from the sausage machine to the hopper system.

The ownership of bogs can be contested, with disputes over boundaries a common occurrence (Cross, 1990b). Dermot recalled an incident in the mid-1980s that led to some tension between a neighbour called ‘Timmy’ and himself over his plot. Another neighbour had notified Dermot that Timmy had one day began demarcating the bog with stakes along with an engineer. Timmy later informed Dermot that he had fee simple ownership of eight plots there. Dermot countered that he had a right of turbary to his plot which he had inherited from his mother in the mid-1970s, and held record of such in a ‘Q3’ document. An agreement was reached that they would

both clarify their positions. In a subsequent meeting Timmy acknowledged his error, conceding to Dermot that he had been misinformed, and that his fee simple was superseded by the rights of turbary granted to the turf-cutters. Timmy accepted he could not exercise his right to the land until the turbary was completely exhausted. In a further anecdote, Dermot remembered that a turf-cutter called ‘Declan’ had fee simple to the other 24 plots, but his own right of turbary was located in one of Timmy’s eight fee simple plots. Of this Dermot remarked: “I found that extraordinary, that he didn’t have his turbary right on his fee simple area.”



Plate 9.2 Plants of the cutover

A diverse range of plants and animals live in Clara Bog SAC. Even in its cutover areas, depicted here, many different of species can be found.

Top left: Bladderworts are pond-dwelling carnivorous plants. Top right: Sphagnum moss – known as ‘the bog builder’. Bottom left: Bog cotton.

BnM acquired much of Clara Bog by 1980 with the intention to use to supply peat to the nearby ESB Ferbane power station (Feehan et al., 2008). It went as far as to drain much of the eastern half of the bog in preparation for production. Dermot said this drainage made extraction of peat by the turf-cutters easier. He remarked, “They did a fantastic job – we were very, very happy.”

Turf-cutting had continued on the western side of Clara Bog even after the plots were opened on the eastern lobe. Dermot estimated that about 38 or 39 tenants continued working there. Dermot recalled that BnM purchased his family’s western plot for about £80. Cathal (35) said

of BnM's purchasing of these plots: "The people didn't know what they were really doing – they only got £200, or £100 for their plot of turf, which was *nothing* [emphasis]. I always reckons (sic)... Bord na Móna stole the bog." It was anticipated that BnM would bring new employment to Clara. Cathal was sceptical of this:

Bord na Móna was going to create a lot of employment in Clara with this bog being drained... But they weren't going to create anything, because they were going to bring the workers from Ferbane [laughs] – it was a misguided thought. I remember the time... when the big protest came about Bord na Móna giving it up to the Parks and Wildlife (sic)... There was big arguments in Clara about all the employment that was going to be lost. *But sure that was all* [tone up] a myth – there was no employment going to be lost, because there wasn't anyone going to be *employed anyhow* [laughing tone].

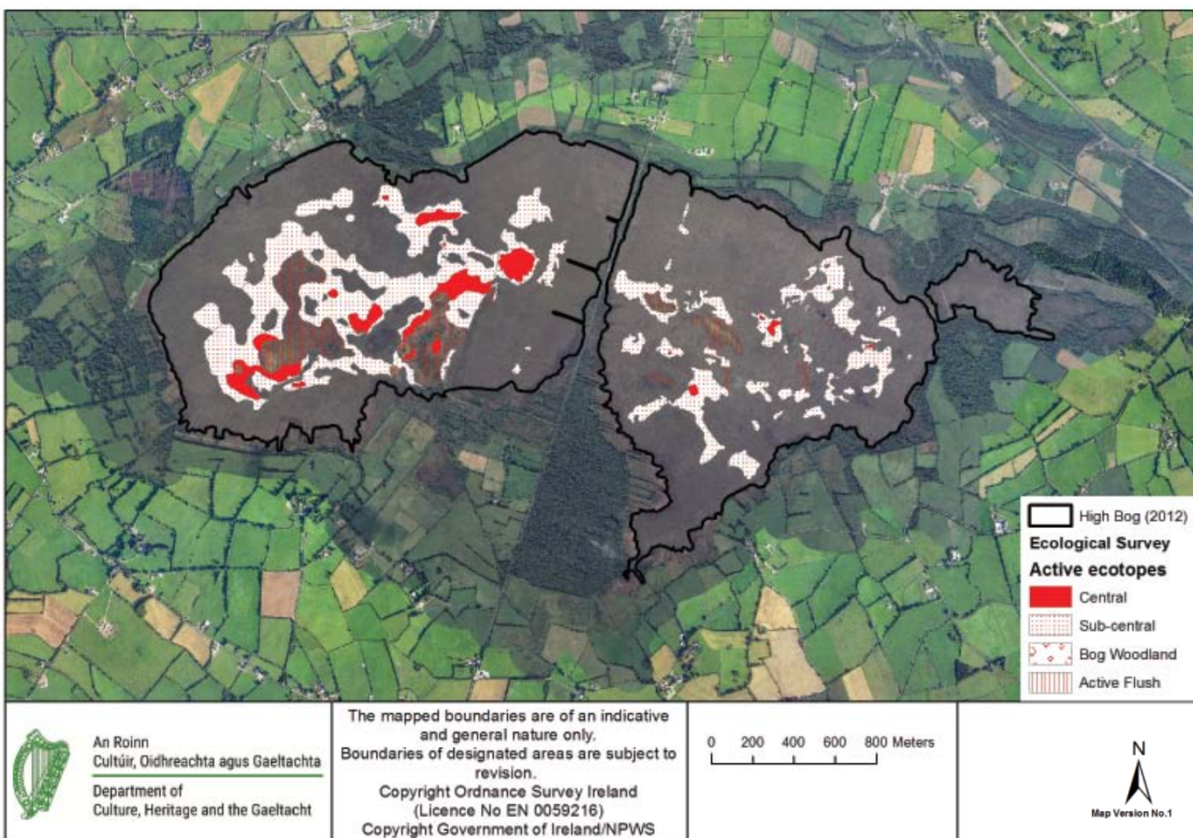


Plate 9.3 Drain-blocking dam This plastic apparatus blocks an old drain previously dug into Clara Bog SAC.

BnM would never industrially extract peat from the bog and it would be preserved following its handover to the Office of Public Works (Wildlife Service) in 1987 (Feehan et al., 2008). This arose following public pressure and campaigns by the Irish Peatland Conservation Council

and the Dutch Foundation for the Conservation of Irish Bogs to have the bog conserved (Crushell et al., 2008). It was ‘saved’ according to Mike (14) “because it was such a jewel in the crown in terms of bogs from a conservation point of view.”

While degraded bogs are never fully restored, they can be placed on a trajectory *towards* restoration. Clara Bog SAC was put on the path to recovery through the installation of dams to block its drains (plate 9.3). Peat-forming communities are evident on sections of the bog (see map 9.2). To get the bog (and others like it) to a stage where it is can recommence peat accumulation it is necessary to halt further degradation. This includes the banning of further peat extraction. This proved controversial as the next section of this chapter reveals.



Map 9.2 Clara Bog SAC is outlined in this map. Active raised bog occurs in both central and sub-central zones. Source: National Raised Bog Management Plan 2017 – 2022 (2018)

In this section, the physical and human geography of Clara Bog were identified. Human activities have slowly eroded the bog through time. Given its unique characteristics the bog was legally protected. This involved displacing turf-cutters who had been entitled to work the landscape through their rights of turbarry. The state’s handling of the transition was

mismanaged, but in time would evolve into a ‘model’ of transition to be applied elsewhere. This is discussed in the next section.

9.3 CLARA BOG: CHALLENGES IN TRANSITION

Following Ireland’s implementation of the Habitats Directive in 1997, the ‘Cessation of Turf Cutting Scheme¹’ was launched in 1999, covering 32 of the eventual 53 raised bogs earmarked for preservation, with the remaining 21 enrolled in 2002 (Häyrynen, Devery and Banerjee, 2021). Graham (9) said (pers. comms. 24/7/2022) Clara Bog was designated as an SAC in 1997. Its transition was a long, at times controversial process. Its case reveals that there are justice implications when designations are placed on private property without due consultation to affected parties.

9.3.1 Notice to quit

Dermot (34) recounted in the late-1990s receipt of notice to cease turf cutting from Clara Bog. The letter had been sent from Dúchas, the predecessor to the NPWS. He recalled: “My first awareness was when this brown envelope arrived at the house, and I’m sure it arrived at maybe 80 other houses as well in the area at the time.” Dermot said that he had been unaware of the designation of the bog prior to receiving the letter. He described his reaction: “I actually picked up the paperwork and threw it in the stove.” Fellow turf-cutter Cathal on the other hand welcomed of the designation of Clara Bog as an SAC as he was supportive of conservation. He assumed at the time that the turf-cutters would be offered relocation. Much to his dismay, he would eventually receive, in his own words, “nothing.”

A meeting of turf-cutters was arranged. Both Dermot (34) and Alan (3) were appointed to the positions of secretary and chairman respectively, despite not being in attendance. A subsequent meeting was held and it was decided to seek further information from Dúchas. A senior officer named met with the group and stressed that turf-cutting at Clara Bog had to stop. No compensation was offered. Dermot recalled how an attendee exclaimed that he would continue to cut turf regardless. The official responded that such actions could lead to their imprisonment. Dermot recalled: “...three or four of the lads stood up and says, ‘I have no problem going to jail for what I consider to be my rights’.” Dermot remembered several more meetings taking place over a year and a half, with the turf-cutters employing a ‘no surrender’ approach. However, officials continued to insist that turf-cutting had to end. Eventually in the early-

2000s, Dermot (34) and Alan (3) met with Síle de Valera, Minister for Arts, Heritage and the Gaeltacht, and Éamon Ó Cuív, Minister of State in the same department, to discuss the matter. No agreement was reached. Dermot said that de Valera “didn’t give an inch,” though O’Cuív he recalled provided tacit support.

Dermot and Alan reported updates on negotiations to the turf-cutters on a monthly basis. The cutting of turf from the bog continued. At the same time, Dermot was slowly learning of the ecological importance of the bog: “It was an education to hear what we were *doing* [emphasis] by extracting the turf from Clara Bog.” He continued: “The environment meant... I’ll be quite honest, meant *nothing* [emphasis] to me, or the majority of the group either.” Dermot recounted how Charlie (29) educated him on the value of bogs during their meetings. They enjoyed a good working relationship, despite being on opposite sides of the negotiations. Dermot said he began to reflect on his actions. He lowered his tone and said: “Jesus [Dermot], you’re an ignorant sod. Could you not see this yourself?”

Eventually a temporary agreement was reached between the turf-cutters and the state. This is discussed next.

9.3.2 The Derogation

The state realised that ending turf-cutting would not be a straightforward process. In order to give time to deal with the matter, a derogation was unilaterally entered into that allowed turf-cutting to continue for ten years. It gave time for matters to be negotiated in some bogs, notably Clara.

Like the issues it was supposed to address, the derogation itself is complex. Commenting on it, turf contractor Brendan (30) said: “There was no such thing as a derogation – yes, the Irish government said there was a derogation, [but] there was never a derogation.” I asked him to elaborate. He responded: “When you go to Europe and ask them did Ireland get a derogation, they’ll say, ‘Absolutely not’.” Dermot confirmed that a ten-year derogation on turf-cutting had been agreed with the department responsible in 2002. Like Brendan (30), he too is sceptical as to its bona fides. He remarked, “I’m not too sure to this day that derogation actually existed.” He described it as being, “A stroke of politics.” Mike (14) agreed: “It was a political call.... There was no legal basis for it. They just decided that, ‘Can’t possibly do this, will give ourselves ten years to phase it out’.” I asked him how the EU responded. He answered, “From

my dealings with the EU, I think they tolerated it – they never sanctioned it.” NPWS ecologist Graham (9) was critical of the length of time the de facto derogation was in place: “It was a ten year derogation, which was way too long. So everybody put their head[s] in the sand. So when the derogation was over, the shit hit the fan.”

By 2009, when the ten years had elapsed for the initial 32 SAC bogs, Mike (14) said the NPWS was still not in a position to halt cutting. He estimated that between 2,500 and 3,000 turf-cutters remained extracting peat on the 53 designated sites. Graham (9) added: “When the derogation was over, 2011 and ’12, about 75% of people by that stage had [stopped] cutting turf.” The derogation had not fully achieved its aim. However, renewed negotiations would be entered into initiated by the turf-cutters themselves, rather than the state. This is discussed next.

9.3.3 Renewed negotiations

Around 2007 Alan (3) said to Dermot (34) that they would need to recommence negotiations with the department as the turf-cutting issue at Clara Bog needed to be finalised. A meeting was arranged. Mike (14) recalled Alan’s unhappiness that no progress had been made since the derogation had been put in place. Both men changed their approach and began pursuing, with the support of the turf-cutters they represented, a relocation and compensation scheme. Dermot said negotiators in the department eventually agreed to a relocation and compensation scheme to run side-by-side. He remembered how some of the turf-cutters the pair represented hoped to “make a killing”, but Alan and himself thought that this was wrong. Instead, they estimated the cost of a year’s supply of heating and then requested this sum from the department. Dermot recalled, “We threw in a figure of €1,000. And nobody collapsed at the table.” The eventual annual compensation would be €1,500. On this, Dermot said, “Neither [Alan] or myself have a recollection of negotiating it at €1,500 [slightly surprised tone].”

A bog called Killaranny was identified in 2009/10 as a possible site for the relocation of Clara Bog turf-cutters. Dermot said that BnM had previously milled it for horticultural peat. It had been left idle for a decade or more due to the high cost of transporting the commodity to the processing plant at Cuil na Gun, near Portlaoise. Dermot remembered that a meeting was arranged with a BnM engineer to discuss their hopes. However, the relocation plans were scuppered when the engineer said that BnM would not give Killaranny to the turf-cutters because the company was seeking more land, not less, in order to continue its activities. Two years thereafter, BnM restarted milling at Killaranny bog, with the resulting peat going to the

Derrinlough briquette factory. Growing frustrated, Dermot decided on another course of action. He said: “*At the time* [lowers voice for emphasis], we had a powerful weapon *in our back pocket*. *In the town we had the Taoiseach* [lowers voice for emphasis]. So we agreed [deep breath] that, me, being a *Clara man* [slight humorous tone], [that] I would have a meeting with the Taoiseach.”

The Taoiseach at the time was Brian Cowen. Dermot said the Cowen family had themselves a plot just five down from his own at Clara Bog, but it had not been cut in some time. He described it as being like a “toe out into the bog.” Dermot said that no one else had cut their turf so it remained undisturbed. He added, “We didn’t pass any remarks on it... The face bank as we would call it... it was staggered anyway as you went down, because I cut five hoppers – my neighbour only cut two hoppers. My next door neighbour again cut ten hoppers, or twelve hoppers.”

Dermot recalled the Taoiseach arriving at home late one Sunday night in 2011. Dermot communicated the demands of the turf-cutter group to Cowen. He recalled the Taoiseach’s response as, “That doesn’t seem to be asking for too much.” Cowen said he would arrange a meeting with the then minister for the environment John Gormley, along with two ministers of state, Pat Carey and Éamon Ó Cuív. At the eventual meeting at Leinster House, Dermot outlined to the ministers what he had told Cowen. Dermot could not recall much contribution from Gormley or Carey, but said that O’Cuiv, who had met with Alan and himself previously, remarked: “Jesus, we’d better give these fellas what the big fella says.” Dermot took ‘the big fella’ to mean the Taoiseach. Dermot recalled that negotiations thereafter continued with the Department of Arts, Heritage and the Gaeltacht. Meanwhile, BnM became receptive to the idea of allowing Clara bog turf-cutters access to Killaranny bog to work alongside them. Progress had finally been made.

The actions of the turf-cutters meant that the state finally relented and offered a form of recompense. This would lead to an amicable solution for many, but not all, of those displaced. The schemes are discussed next.

9.3.4 Compensation scheme

As there was no established market for turbary rights, the NPWS had to estimate the value of each bog plot. Mike (14) said they estimated that a half-acre of turbary bog without a clear title

was worth between €3,000 and €4,000. The compensation scheme initially provided €1,000 per year for ten years, as per Alan and Dermot's initial request. Mike said turf-cutters would receive "ten grand for something worth three grand, four grand." However, there was a problem with this calculation as he explained:

We realised that you'd easily get a load of turf that'd keep you for a year for less than a grand... What it didn't provide for was... what do you do after the ten years?... Will they be left high and dry after that period? And that was something that we were worried about. So eventually that was upped... €1,500 a year I think for fifteen years, and there was a starting sweetheart payment... So it ended up about €23,000. And we got it actually made tax free as well.

Dermot noted that the cash payments were 'index linked' and had since risen to €1,554 per annum for 15 years. Whilst it was welcomed by those who qualified, the scheme would run into controversy. Mike said one of the eligibility criteria was that applicants had to demonstrate that they had been cutting in the previous five years. Furthermore, those that were cutting had to prove their right of turbary. Mike said: "A lot of people who were cutting, and they were genuinely cutting [deep breath] *for years* [inflection in tone] and years, couldn't show us any bit of paper that they had a right to be there." I asked Mike how he handled this particular challenge. He responded: "We decided to do it by affidavit." These were then cross-checked with aerial photography and on the ground inspection. Furthermore, those who represented genuine turf-cutters "weren't allowing chancers in," said Mike recalled.

Not all stakeholders were happy with the compensation scheme. Anne (11) was critical of the overall cost, claiming that the state has paid out €20 million in compensation, with this likely to climb to €60 million once the scheme is over. Furthermore, there was frustration over eligibility criteria. Brendan (30) said: "There was offers given of compensation to the person that was cutting turf – not the contractor... At no stage were they ever offered anything." Mike conceded this omission, noting that one of the problems surrounding the compensation/relocation package for the turf-cutters was that there was "nothing in the solution for contractors," before he reasoned that this is "because they had no legal interest in what they were doing – they're just providing a service to people who had turbary rights." The disregard of contractors from any form of compensation would contribute to significant acrimony in the years ahead.

The loss of business for Brendan and other contractors could have serious implications for rural livelihoods. Brendan described a rural economy where people were dependent on ad hoc working arrangements – farmers working part-time in BnM “so they were viable”, and turf-contractors baling hay for farmers in the summer after a spring extracting peat, in order to make a living. Mike saw this somewhat differently. The turf-cutting contractors he said were “part of the irregular economy – very much a cash-based thing.” Nevertheless, Mike said the NPWS had considered how to get through the emerging impasse. A scrappage scheme for hoppers was mooted along with efforts to involve turf contractors in the restoration of bogs. This did not progress however as due, as Mike put it, to a breakdown in communications. Despite his misgivings, Brendan said that for contractors, their opposition to the ban on turf-cutting in protected bogs was “never about money.” He explained: “It is about holding our rights, holding our tradition, holding our heritage and holding [deep breath] a right to make a living. But absolutely at no stage were contractors offered any money.”

Financial compensation was not deemed an adequate outcome for some turf-cutters. These people may have had strong cultural attachments to the practice of saving turf. I asked Mike why some people did not want compensation. He responded, “Because *some just love cutting turf* [playful tone], and they wanted to have somewhere they could continue to cut turf.” Relocation was offered to them.

9.3.5 Relocation scheme

Mike was involved in the transition of two bogs: Clara in Co. Offaly and Carrownagappul and Co. Galway. He described these as ‘demonstration projects’. He said that most people chose relocation at these two bogs “because I think we were in a position at that point to show them where they were going.” Nevertheless, he said that getting closer to ‘relocation day’, some people dropped out of the scheme and opted for compensation instead.

Dermot opted for relocation. Like others on the scheme, he received two once-off separate cash payments: €500 for signing up to the relocation scheme agreement with the NPWS and a second payment of €1,000 as a goodwill gesture. However, Anne (11) was again critical of the resources put into the relocation schemes. She said, “It’s a huge amount of money, huge amount of staff time.”

The relocation schemes were made possible by BnM. The semi-state enjoys a close working relationship with the NPWS. Graham explained that BnM, even though it is a semi-state company, works as a private operator under contract to the department. Alongside reprofiling bogs for displaced turf-cutters, these contracts include activities such as bog restoration. Ian (5) worked on the relocation of displaced turf-cutters. He recalled how the NPWS employed BnM to perform surveys on sites considered for relocation. Ian described how surveyors utilised a technique called the Von Post test to determine the quality of peat at a given location. If it was deemed suitable, BnM would work with stakeholders to arrange the turf-cutter relocation.

BnM had prior experience of relocating people. Mike said they had moved people from bogs in order to exploit these lands itself on an industrial scale. Displaced turf-cutters had been given a right to cut elsewhere. He added:

Bord na Móna were terrific in that they had a very good understanding of the bogs, and they'd a very good understanding of the people who were using the bogs. They had done deals with these people down through the decades, and they *knew* [slight emphasis] a lot of them, and they knew their families... And they knew the deals that had been made and why people ended up cutting in a particular place. And they knew the people who had a right to cut somewhere, and they knew the people who were cutting who didn't have a right to cut. And then they also knew the influence of the contractors as well, [who] were having a big bearing on the animosity that grew.

Nevertheless, mistakes had been made by BnM. Mike acknowledged that sometimes people had been relocated to bogs of high conservation value.

The experience of BnM was evident in Dermot's recollection of how the company prepared Killaranny bog for the Clara turf-cutters. First, he said, they drained the bog, then put a road into it to allow for access. Finally, they removed vegetation off the face banks, much to Dermot's satisfaction. However, such works would have been expensive as Anne has argued.

The first cut proper commenced in 2013. Dermot described the quality of turf as 'fantastic'. Moreover, those who transferred were granted the same amount of turf in Killaranny as they had left in Clara. This was calculated in hopper loads. BnM assisted the department in gauging

how much turf each person had left in Clara. Brendan said that the average amount of turf cut for a house per year would be ten loads from a self-propelled hopper with a capacity outputting ten sods over 100 yards. It was found that Dermot had 580 hoppers² left in Clara. He calculates that there is enough turf left in his turbary allocation to heat his home for 40 years.

This section has recounted how the conflict over Clara Bog's transition into an SAC has been largely resolved. The 'model' envisaged, now called the Cessation of Turf Cutting Compensation Scheme – Special Areas of Conservation (CTCCS), was realised in principle. However, conflict continued elsewhere. In the next section, this is closely examined.

9.3.6 Retrofit

The CTCCS may have resolved much of the political difficulties of the transition of turbary bogs into SACs, it did not fully resolve the environmental issues around turf-cutting. The scheme helped preserve the highest quality peatlands, but did nothing about greenhouse gas (GHG) emissions. Mike (14) acknowledged this. He expressed concern that moving turf-cutters from one bog to another was simply shifting the problem of carbon emissions. He said that they should have been moving people out of peat extraction and turf burning altogether. Anne (11) argued that the state should have converted people's homes to be more energy efficient. She noted that as peat supplies run out, and the retro-fitting of houses will have to happen eventually. The compensation received by turf-cutters she concluded is a mere stopgap.

Mike recalled talks with the Sustainable Energy Authority of Ireland. NPWS was prepared to give a total of €23,000 to each turf-cutter affected by the SAC designations. Mike considered how this sum of money might instead be put to use to insulate turf-cutters' homes and/or provide a more sustainable form of home heating, based on the Warmer Homes scheme. Mike thought a retro-fit plan was a "no-brainer" because "a lot of the houses I went to... were... fairly rundown, derelict – old fellas living in these dire houses, crappy windows, no insulation." He said that many were poor, and using "an awful lot of fuel... all the heat was going up the chimney." The plan never materialised. Reflecting, Mike said, "It's one of my regrets that it didn't really take off." He said the NPWS didn't have the resources to make it happen. Moreover, participants were obliged to provide a proportion of the funding, which would have precluded low-income families. I asked Dermot (34) if he would have accepted a home retro-fit instead of the bog relocation he received. Intriguingly, he said he would. I asked if this had

been offered to him, to which he responded that it had not. He said, “We hadn’t the vision at the time to ask for it.”

This section outlined the long transition of Clara Bog from the time notice was given to cease extraction to the point where turf-cutters were compensated, either financially or through relocation (see plate 9.4). This was a community-led effort which would influence state policy in the years thereafter. However, it did not resolve the wider issues surrounding turf-cutting on designated sites. This is examined in the next section.



Plate 9.4 A turf-cutter A turf-cutter surveys cutover bog near his old plot at Clara Bog SAC. He now cuts turf elsewhere, satisfied with the eventual arrangement he was granted.

9.4 THE PEATLANDS COUNCIL

In this section, continued conflict over restrictions on turf-cutting in designated bogs is outlined. Out of this emerged the Peatlands Council, which would endeavour to resolve these issues once and for all.

9.4.1 The Peatlands Council emerges

Retired BnM surveyor Ian (5) described the designations of bogs and the displacement of turf-cutters as “very emotive,” particularly in the west of Ireland. He recalled protests at a bog near Portumna, Co. Galway, where the Gardaí had to intervene. Mike (14) added “*there was a lot of intimidation* [elevated tone] at the time, there was a lot of online... sort of bullying.” He explained the circumstances from which this had arisen: “There had been instances on a number of bogs involving enforcement action. Because what was happening was [very deep breath] the [Irish] state was being leaned on by the [European] Commission. We were out doing flyovers of the bogs on a weekly basis.”

Bogland reconnaissance sought to identify incidences of illegal turf-cutting. The Gardaí were notified and efforts were made to both stop cutting and determine who was responsible. Brendan (30) recalled the circumstances as the derogation came to an end. He described 2011 as “probably the biggest, hardest year.” He said that “it wasn’t advisable the way [the state] were trying to frighten people... Sending planes, helicopters...” Mike said: “A number of stand-offs happened as part of that... There was the threat of violence – there was some violence. There was damage to property, that type of thing. And then it got into this nasty sort of intimidation...” I asked who this was aimed at. Mike took a deep breath and answered that it was targeted at several people, including NPWS staff and the Gardaí. He continued: “It was also targeted at people who were seen to be cooperating with the department or taking compensation... I know that people like Alan... came under a lot of pressure at local level. And people were trying to disrupt what they were trying to do.” Mike then alleged that efforts were made by some to disrupt agreements that had emerged. This he said may have been rooted in “general anger” in the midlands surrounding the fallout of the financial crises that was ongoing in Ireland at the time. But out of this acrimony Graham (9) said emerged the Peatlands Council.

In March 2011, an Enda Kenny-led coalition of Fine Gael and the Labour Party emerged following the election of the 31st Dáil the month prior (McDonald, 2011). Jason recalled the formation of the Peatlands Council: “It was founded within a day of the formation of a new government.” He said the Peatland Council was formed as a result of legal action taken against the state: “The government of the time were confronted with an issue arising from EU action [pauses] against Ireland for turf-cutting in designated raised bogs, mostly the north-midlands. It had become a very contentious issue. The government undertook as part of their programme

for government that they would address the issue.” Jason (10), who was on the board of BnM at the time, was appointed to the Peatlands Council. He immediately resigned from BnM.

The Peatlands Council’s role was to identify what the issues were in the context of turf-cutting and establish how these might be resolved. Jason said this involved community engagement. He recounted his approach to this: “I wouldn’t meet people in offices and I wouldn’t meet people in town halls or anything like that, because I know from many, many years of consultation work in rural areas that [deep breath] a farmer with and without his hat on are two very different people. So I would meet people out on their bog.” Later, reflecting on these interactions, he said: “I’ve thought about it a lot afterwards, and what I’ve realised was that people on bogs – when they’re on their own bog – had a sense of security and confidence that made them very articulate.” Jason said the groups remarked that he was the first person who had come to see them to discuss their concerns. He concluded:

I very quickly formed a *view* [emphasis] that there had been a major breakdown in communications between official agencies and these communities. I found the communities extremely well intentioned, decent, law-abiding people who had, through no fault of their own, been manoeuvred into a position of illegality. To deal with that, I established a truth and reconciliation equivalent which I called the Peatlands Forum.

Charlie (29), who was an ecologist at the NPWS at the time, was critical of Jason. Charlie said that Jason had “in some way been *captured* [strong emphasis] by the turf-cutters.” Charlie recalled Jason being critical of the Habitats Directive and dismissive of those who insisted that nature conservation was of national importance. However, the Peatlands Forum would progress efforts to bring conflict on the bogs to an end. It is discussed next.

9.4.2 The Peatlands Forum

Chaired by Justice Quirke, the Peatlands Forum took place in 2012 at the Hodson Bay Hotel in Co. Roscommon (Deenihan, 2012). Quirke (2012: 7) explained that the Forum’s “...primary objective was to address the concerns of communities, associations, organisations, state bodies and individuals who have been or will be affected by the restrictions on turf cutting imposed by the Habitats Directive on Ireland’s 53 raised bog Special Areas of Conservation.” Each turf-cutter group affected presented their case before the judge. For Jason (10) the overall process was not about with revenge, but justice. Describing the Forum as an “interesting experience,”

Mike noted that not all interest groups were represented. While the TCCA were there, Alan (3) was not.

Justice Quirke's findings from the Peatlands Forum are outlined in the Quirke Report (2012). Quirke (2012: 10) found that the concerns raised by the turf-cutting communities "were very strongly expressed and were remarkably consistent." He added:

Most registered dismay and deep offense at what they perceived as a failure by the state and its agencies to communicate with them and provide them with adequate notice, advice, information or assistance in respect of what they perceive to be a measure which will deprive them of a vital, natural resource situated on or near their homes or properties and which forms a fundamental part of their livelihood, their sustenance and their heritage.

Quirke (2012) noted a myriad of other concerns held by the turf-cutters, including fears over the depreciation in value of their property following peatland designations and flooding of lands adjacent to restored bogs. He concluded:

- Turf-cutters were acting in good faith;
- The rights held by turf-cutters are complex and it is unsurprising that the state had difficulty navigating these;
- Breakdowns in communication and trust had occurred, but active engagement with interested parties and input from senior political levels would likely lead to resolution;
- Issues surrounding the legality of the designation were raised but it was not within the remit of the Forum to adjudicate on such matters;
- A national plan to deal with Articles 6.3 and 6.4 of the Habitats Directive should be actioned by the Peatlands Councils immediately, with input from TCCA.

Reflecting on the process, Jason expressed frustration at the handling of the transition of SAC bogs. He viewed the 'mistreatment' of turf-cutters as 'scandalous'. Jason was also critical of the European Union's alleged intervention: "The Commission were forcing Ireland's hands to take action against these [turf-cutters], criminalising them, and the *conclusion* [emphasis] of Judge Quirke's report was that he had never seen so many good people put into a criminal position without it being anything to do with them." However, Quirke at no point

acknowledged the value of conserving what is a threatened and rare habitat type of international importance. Neither was the legality of the derogation remarked upon in his findings.

This section described the formation and work of the Peatlands Council in its first two years. Perhaps its most important contribution in that time was the establishment of the Peatland Forum. This offered turf-cutters displaced from designated bogs an opportunity to express themselves and seek resolution. The chair, Justice Quirke, produced a report which vindicated turf-cutters and recommended that a national plan to deal with the issues should be put in place. This is examined next.

9.5 IMPLEMENTING QUIRKE'S RECOMMENDATIONS

In this section, efforts made after the publication of the Quirke Report to resolve the conflict over the banning of turf-cutting on designated bogs are identified and discussed.

9.5.1 A new strategic vision

Alan (3) replaced Jason (10) in the Peatlands Council in 2012 (NPWS, N.D.b). Two key peatlands documents emerged in the following years: The National Peatlands Strategy was published in 2015 and the National Raised Bog Special Areas of Conservation Management Plan 2017-2022 was published in 2018. Mike (14) described the Peatlands Strategy Working Group. It included Alan and various stakeholders including the NPWS, BnM, the EPA, and various government departments. Oscar (17) oversaw the drafting process. Anne (11) said, "The motivation for writing it was the EU were about to fine us for not protecting raised bogs." However, she expressed concerns at what she saw as the document's raised bogs slant. This approach she believed neglected blanket bogs. Anne argued that the political pressure to manage the raised bogs explained the perceived lack of balance in the strategy. This is perspective is supported by Mike, who said: "Most of my period in the National Parks and Wildlife was... driven by Brussels. It was driven by infringement proceedings... We'd have to put in a programme of measures to bring us into compliance."

For Mike, the National Peatlands Strategy (National Parks and Wildlife Service, 2015) was a means to communicate to stakeholders a way forward; it was a 'vision' document. He remarked that there were efforts to ensure that it did not 'upset' any particular group; "You couldn't give huge burdens to various sectors at this juncture." The document went out for public

consultation, was revised, and eventually adopted by the government. I noted my own observations of tension within the strategy, and that it attempted to appease everyone. Mike responded that the strategy “Is not an action plan. It’s not a list of what we’re going to do with peatlands... It was really an attempt to try and start a conversation.” Although she wasn’t completely satisfied with the strategy, Anne concluded, “It’s great to have something between covers.” Brendan (30) struck a cautionary tone: “You’ll have no Peatlands Strategy *if* [strong emphasis] you don’t get the cooperation and work with the local people in the local areas, and that’s a fundamental point.”

Striking a balance between contested perspectives is challenging. I asked Graham (9) what the difficulties were in implementing the National Peatlands Strategy. He responded: “Resources as ever – I think that’s clearly a big one. We have the National Peatlands Strategy; we don’t have the resources to fully carry out all of the measures or all the actions.” He added that a second difficulty was not having a team to actively engage with partners: “We do have the National Peatlands Strategy Implementation Group, which meet two or three times a year. [Alan] chairs that as well... So it does meet and it does review.” The Implementation Group’s last progress report was published in 2017. The NPWS has published reports itself for 2018 and 2019. Graham accepted: “The people, and all of the agencies who should be engaging in implementing the actions of the Peatlands Strategy probably haven’t engaged as much as they would like, and that’s possibly because we don’t have a team in here chasing everyone all the time to pursue the actions.”

The turf-cutter conflicts continue to use up valuable resources. Graham succeeded Charlie in the NPWS in 2014. He has oversight of marshes, fens, lakes and raised bogs. He conceded: “Because of the issue of protecting the raised bogs, and particularly around the issue of turf-cutting, and that debacle – that’s a lot of work. I’d say 80% of my time is spent on [deep breath] efforts to protect and conserve the raised bog network.” He travels to Brussels two or three times every year to meet with EU officials to discuss how the Irish state is actively protected its raised bog Special Areas of Conservation. He said, “There’s an EU infringement case outstanding against Ireland, which is why we go to Brussels so frequently. So that’s a big part of our work... to try and keep working on that infringement case... Part of that issue [is] there still is a lot of turf-cutting within the Special Areas of Conservation.” Progress is submitted via Habitats Directive Article 17 reporting. Graham described it as a “dense document – a lot of science, a lot of statistics; a lot of effort goes in there,” and therefore significant resources.

NPWS continue to balance the demands of the European Commission and the turf-cutters. Justice Quirke made a recommendation which could finally resolve the impasse. This is examined next.

9.6.2 Articles 6.3 and 6.4 of the Habitats Directive

Graham said that about 300 people were still cutting turf within the Special Areas of Conservation. Brendan (30) admitted he continues to cut turf from a designated site. He nevertheless acknowledged that the NPWS was making a renewed effort to solve the matter of turf-cutting on protected raised bogs. Where there were suitable alternatives offered within a distance of up to five miles, Brendan said that turf-cutters would relocate. He continued:

Where there wasn't, we done the scientific analysis on the degraded part of the bog that... Say a bog might be 3,000 acres – all we ever wanted was 100 acres.... For everyone.... Because you'd have no more than 100 people at an acre each. And a small, little corner... the toes of an elephant is all we wanted, and we had to prove then that you wouldn't have an adverse effect on the bog. And we've done all that.

However, there are no raised bogs of 3,000 acres (1,214 ha) remaining in Ireland. Amongst the largest is Clara Bog at 1,078 acres (436.5 ha) (National Raised Bog Special Areas of Conservation Management Plan 2017 – 2022, 2018: 119 – 120). 100 acres requested from such a bog would amount to 10% of the landscape. Given that other sites are smaller than Clara Bog, such a figure is unreasonable given the rarity of the habitat. However, some turf-cutting might be permitted to continue on designated sites on a smaller scale.

Brendan claimed that survey work had taken place on twelve bogs. He said, “We'd have proved scientifically that there should be no reason why they couldn't be taken out... or that they cannot be cut on without affecting the integrity of the rest of the bog.” Accepting this, Graham explained how the NPWS was now managing the SAC turf-cutter impasse through Article 6.3 of the Habitats Directive:

A lot of my work over the last four years has been working on what we call Article 6.3. This is a mechanism with the Habitats Directive where you *can* [emphasis] allow an impacting activity to continue within a Special Area of Conservation as long as you can prove that it isn't

impacting on the integrity of the site – so it’s not causing any ecological damage to the Annex 1 habitats.

Graham conceded that there are still turf-cutters who the NPWS cannot realistically accommodate on other bogs, who will not take a compensation package and who have not sold their land to the state body. These people feel that they have been given an unfair offer according to Graham.

Articles 6.3 and 6.4 of the Habitats Directive are outlined in the National Raised Bog Special Areas of Conservation Management Plan 2017-2022 (2018). The plan acknowledges that efforts by the Department of Culture, Heritage and the Gaeltacht, BnM and turf-cutting interests groups may not always yield suitable alternative sites for continued domestic extraction. It states: “In this scenario, the state in this plan explores the options of utilising the provisions of Article 6(3) and Article 6(4) of the Habitats Directive to provide for consent to cut turf within defined areas of a small number of SACs (ibid: ix).” The plan interprets that Article 6(3) of the Directive “provides that consent by the relevant public authority for certain plans or projects can be given only where it can be demonstrated that they will not adversely affect the integrity of a European [Union designated] site (ibid).” If limited turf-cutting cannot be permitted under Article 6(3), Article 6(4) could be used instead to enable the practice to continue. The plan says: “Article 6(4) allows for a plan or a project that has been subject to a negative assessment [under Article 6(3)] but for which there is no alternative solutions to proceed when it must be carried out for ‘imperative reasons of overriding public interest’ (quotes in-text; ibid).” The plan continues: “This measure could be explored in a limited number of cases and as part of an overall solution to the management of the raised bog SAC network (ibid).” Graham is project managing this process. He said: “There’s 14 sites that we’re working on – nine or ten of them we’ve managed to find areas within the bog where people *can* [emphasis] continue to cut turf, but that kicks it into a planning process as well, so that issue is still ongoing.”

The NPWS is working with RPS Group Belfast to identify areas within the designated bogs where it is possible to cut turf without damaging the integrity of the site. Graham said the work had been ongoing for about four years. He explained that the process had been successful: “So, [on] ten of those bogs, we have been able to prove using *very* [emphasis], very resource demanding scientific techniques including geophysics, organic matter analysis and ecotope

mapping, we've been able to prove that some turf-cutting on the *edges* [emphasis] of some of these bogs will be *okay* [emphasis].”

The deep divisions that once existed between the state and the turf-cutting community are now gone, as Graham explained, “The stuff we seen on telly in 2012/13 – that’s gone away because there is ongoing discussions to try and resolve the issue.” This was acknowledged by Brendan: “We’re making progress. It might be slow, but bit-by-bit we’re making it.” He acknowledged that new personnel in the NPWS had contributed to this constructive working relationship. However, in Spring 2022 a ‘turf war’ again erupted due to government plans to ban the commercial sale of turf on health grounds. The bogs remain ‘contentious terrains’ (Gladwin, 2016).

9.6.3 Peatlands Council appeals committee

The Peatlands Council is still in place. Despite the efforts of stakeholders to agree recompense, designated bogs remain contested landscapes. Dermot (34) is involved on its appeals committee. He said that there are people who have yet to be compensated that have a turbary right or fee simple to a bog which they cannot access. Much of this arises from the stipulation that those who received compensation had to be active turf-cutters. Dermot found this to be unacceptable. Some of the cases he and his colleagues hear have been ongoing for up to five years. I asked Dermot what should happen. After taking a deep breath, he said, “I don’t think it will be resolved until a package is put in place.”

Cathal (35) is one of those affected. He received no compensation and was not offered relocation after the designation of Clara Bog as an SAC. I asked him why this was. Cathal paused before answering: “That one now... is an awkward situation. I’d rather not... That was part of my own fault as well as...” Mindful that this appeared to be a sensitive topic, I asked if he had not cut for five years. He responded, “We didn’t cut for a number of years prior to that.” To confirm, I asked if this meant he was ineligible for compensation. In a strong tone he responded, “Yeah.” He said, “You have to be a ‘live’ turf-cutter.” I asked how he felt about this. He responded, “Got over it now. Doesn’t matter.” I asked how it made him feel at the time. He said, “I felt that I should have been compensated. The [turf] bank was there – we always cut the bank.”

This section discussed the development of the Peatlands Strategy and the National Raised Bog Special Areas of Conservation Management Plan 2017 – 2022. These emerged following the recommendations from Justice Quirke at the Peatlands Forum in 2012. Moreover, efforts to implement Articles 6.3 and 6.4 of the Habitats Directive in the context of raised bogs where turf-cutter relocation is not feasible outlined. While cooperative efforts will ensure that conflict is unlikely to breakout again, the implementation of these Articles has been expensive. Yet even this does not fully appease turf-cutter interests. Ongoing appeals to the Peatlands Council continue by those who were not deemed eligible for the CTCCS. The challenges presented here reveal the difficulties inherent in transforming land-use.

9.7 RAISED BOGS, NEW VALUES

With much of the conflict around turf-cutting dealt with through compensation, relocation and measures to facilitate limited extraction from SAC sites, new value systems have begun to emerge. Charlie (29) is now involved with the Community Wetlands Forum. He feels it supports people to appreciate “what they’ve got, to protect it at their local level – and then it’s much more real – it’s not like the feckin’ Amazon Forest or something else like that!” Following the preservation of Clara Bog as an SAC, I asked Cathal (35) how had he come to appreciate it in a new way, if any. He answered, “well, I think the country is better educated now as to climate. And I think people [have] bought into... saving bogs.”

I asked Graham (9) how bogs had historically been valued and how this had changed. In his answer he remarked that bogs “were a fairly handy place to dump your rubbish.” He said that there were old cars, fridges and other rubbish dumped in bogs routinely all across Ireland (see plate 9.5). Cathal answered similarly when I inquired had there been a change in how Clara Bog was valued. He answered: “*Oh* [tone up] yes. Like, when we were young, everyone perceived the bog to be a *dump* [emphasis]... When you’d be cutting turf, filling up a bog hole, any old rubbish around the yard, you’d bring it out, throw it into the hole and cover it up... I’m sure you’d find... *loads* [emphasis] of rubbish underneath that bog... if you dug down.” Cathal continued, “But that has all changed now, for the better.” He added: “In the last few year[s]... We learnt to appreciate a bog for a different reason... The reason we appreciate a bog now is for clean air, people walking, enjoying the different animals and the different birds and the sounds and what have you. I think probably the bog has turned a full circle.”



Plate 9.5 Evidence of dumping A suite of furniture dumped into a bog drain near Rathangan, Co. Kildare.

Cathal is involved with the local heritage committee in Clara. A 1km boardwalk was installed on the bog to allow access for amenity. Once an active (albeit uncompensated) turf-cutter at Clara Bog, Cathal now values the landscape somewhat differently. He said, “When you come out to the bog... the air is so clean and you can actually feel it. It’s a great local amenity for people to be able to walk on a bog.” Anne (11) expressed a similar sentiments, noting the characteristics of bogs as being “open in character, [with a] lovely breath of air on them.” I asked Cathal if the local people use it regularly. He responded: “[They] never stop using it. From seven in the morning until eleven at night, people are walking *on* [emphasis] the bog. And it doesn’t matter if it’s *raining* [emphasis] or not, they’re still walking on the bog.”

Conservation efforts are ongoing to restore and protect raised bogs. Anne was critical of the state’s actions. She said, “Nobody ever does something until it’s too late.” Nevertheless, there has been some conservation success. Graham described the Living Bog Project. Twelve raised bogs were selected for restoration, including Clara Bog SAC. 75% of the cost was derived from the LIFE programme, with the remainder coming from the Department of Culture, Heritage and the Gaeltacht. It employed five people. All drains within the selected sites were blocked. Graham explained that the efforts included negotiating with and compensating landowners. No turf-cutting is taking place on these bogs. Yet there is significant work to do if Ireland is to rehabilitate its degraded peatlands more widely. Anne said that, “Coillte are the biggest

peatland owner in the country, with the lowest profile ever.” The future of BnM cutaway bogland is as yet unknown.

Attitudes towards the NPWS have improved. Graham said that a “chasm” no longer exists between the turf-cutting community and conservationists. He puts this change down to the pivot by the NPWS to allow some limited turf-cutting on SACs. He explained: “Initially when they were designated, the SACs and the NHAs in 1999 onwards, up to 2005, we just seen them as sacrosanct – we seen them as really, if we want to protect their nature conservation value, we just could not have turf-cutting.” He continued: “To be honest... nine times out of ten that still is the case, but we viewed it... we probably viewed it very strictly - it was black and white, but I think we’ve now moved into the grey zone, where we can now appreciate that yeah, we just can’t resolve the issue without allowing some turf-cutting.” The labour that had remade these landscapes and been excluded would be allowed to return. Graham hoped that this movement by the NPWS would be appreciated by rural communities, and that they would acknowledge that “the department is willing to change its mind, it is willing to facilitate people and to work and negotiate and try and come to a compromise.” Anne is more wary and said there remains a lot of anger towards the NPWS despite its efforts in recent years to compensate turf-cutters. She said, “It doesn’t take much to strike that anger up... [This] makes the job incredibly difficult.”

9.8 CONCLUSION

This chapter examined the Irish state’s efforts to transition turbary bogs deemed of high scientific value into Special Areas of Conservation, and the implications this had for those who depend upon them. It outlined the case of Clara Bog SAC, the ‘jewel in the crown’ of Irish raised bogs, and the settlement that was eventually arrived at. However, this chapter demonstrated that the model that emerged from Clara Bog was not always applicable elsewhere. Moreover, it identified the state’s error of side-lining contractors during negotiations.

This chapter identified the challenges inherent in landscape transition more generally, where environmental concerns come into conflict with human use of natural resources. It illustrated that the economic and social costs of climate action are often spread unevenly across society. Communities blighted by the decline of the peat sector face further upheaval as turf-cutting is

restricted. The recent emergence of further ‘turf wars’ as the government aims to restrict the commercial sale of turf on human health grounds without providing sustainable alternatives adds further burden to already marginalised rural lifeways.

While the turf-cutter crisis has not been fully settled, new visions for the bogs have emerged. Locals are rethinking their relationships with peatlands and utilising them in novel and sustainable ways. Many of these landscapes now have a chance to recover and once again contribute ecosystem services, such as carbon sequestration, biodiversity and water retention, back to the public.

In the next chapter, BnM’s historic utilisation of cutaway bogs is considered. While this study has argued that the peat sector has been in a long decline, the next chapter reveals it has also been in a long transition.

Footnotes

¹ This may not be its official title

² NPWS standard: ten sod machine extruding over 90 yards. Dermot’s contractor cuts the equivalent of 14 hoppers of the NPWS standard for him every year, using a ‘local’ standard of nine hoppers with an output of 14 sods for 100 yards. Dermot uses six or seven local standard hoppers to heat his home every year, and stores the remainder in his turf shed for when he is no longer physically able to save turf. His stockpile at the time of interview was five years’ worth of fuel

CHAPTER TEN:

THE LONG TRANSITION OF BORD NA MÓNA

10.1 INTRODUCTION

The generation of energy for human use alters and produces new landscapes, networks and relations across space (Day, 2021). But these systems are not permanent. Fossil fuels are finite in nature and once exhausted, challenges emerge. This study has argued that rather than stopping suddenly, the Irish peat industry has been in decline for decades. However, this chapter reveals that alongside its long decline, BnM and the landscapes it worked have also been in a long transition. This chapter addresses the following research question:

What will become of the post-industrial bogs? How have these landscapes been utilised historically?

With a focus on BnM's Boora group of bogs in Co. Offaly, this chapter evaluates BnM's historical utilisation of post-industrial bogs. Many of these peatlands have been completely cutaway. Decisions made concerning their after-use have environmental, social and economic consequences. Many have failed, often because their business model was not viable. Others hint at a just transition, decades before the term entered into mainstream lexicon. However, no option identified provides employment on the scale of peat extraction. The chapter begins with an examination of the widescale conversion of post-industrial bogs into agricultural land.

10.2 A NEW COUNTY FOR AGRICULTURE

In February 1980, Irish broadcaster Mike Murphy visited the BnM Derrygreenagh group of bogs in the east midlands to report on its utilisation and future potential following the end industrial production (RTÉ Archives, N. D.a). Murphy and his guide Brian are seen in the footage traveling on a train around the industrial bogs. At one point Murphy inquires, "What happens then when [the peat] is all cut away?" Brian responded, "When it's all cut away, it's reclaimed then." The two men visit a pasture used for cattle rearing. We find out this farmland was once bog. Brian gestures toward a nearby field used for barley. He explained that the

reclamation took just a year and a half. Later, Murphy asked, “When all the bogs Bord na Móna owns in Ireland have been cutaway, how much... reclaimed land will there be altogether?” Brian responded, “When all the bogs are cutaway in this country there will be 170,000 acres.” Murphy responded, “That’s about the size of a county – the county of Louth for example.”

A vision emerged that the vast post-industrial bog landscape would in time provide a new productive space for furthering the state’s agricultural ambitions. 68,000 ha out of BnM’s 80,000 ha of land would be converted to usable farmland. Brian envisaged that peat workers who lost their jobs on the bogs as they became cutaway would be redeployed within this expanded agricultural sector, in what might be considered a form of just transition. However, converting cutaway bog into productive farmland would prove more difficult and expensive than first imagined. When considering agriculture in bogs, Bellamy (1986: 151) reasoned that: “If you are able to spend enough time, energy and money you will be able to grow anything anywhere, but it’s a different matter when you have to realise an economic return on your investments. In the halcyon days of all sorts of subsidies almost anything is possible.” However, BnM did not possess unlimited resources. While it was technically possible to reclaim the bogs it would be at considerable cost.

Clarke (2010) presented an account of agricultural development in BnM. In the 1960s, the precursory to Teagasc, An Foras Talúntais, lead research into industrial bog after-use, with early findings indicated that grassland, ahead of cropland, would be the optimal after-use. Vegetable trials were mixed, although some had performed reasonably well on deep Derrygreenagh bog group peats, but finding a market proved difficult. Between 1973 and 1980, 120 hectares of cutaway bog at Oweninny, Co. Mayo was converted into grassland for sheep production. Poor animal ‘performance’ due to adverse weather conditions resulted in losses for BnM, and in by 1983 the project had been wound down, just ten years after it commenced.

Barry (22) is a landscape manager at BnM. He began his career in 1980 converting cutaway bog into agricultural land. This, he worked on for ten years. He remarked: “At that stage, the bog was looked on as a... had great potential towards agricultural [deep breath] development, and it was looked on as if we were going to create a new county in Ireland for agriculture.” Barry continued, “I moved on from that over the years. Obviously the perception has changed.” I asked Barry how the ‘county for agriculture’ plans turned out. He responded, “It was quite successful,” but with the caveat, “Well, we were probably... We were working on better areas.”

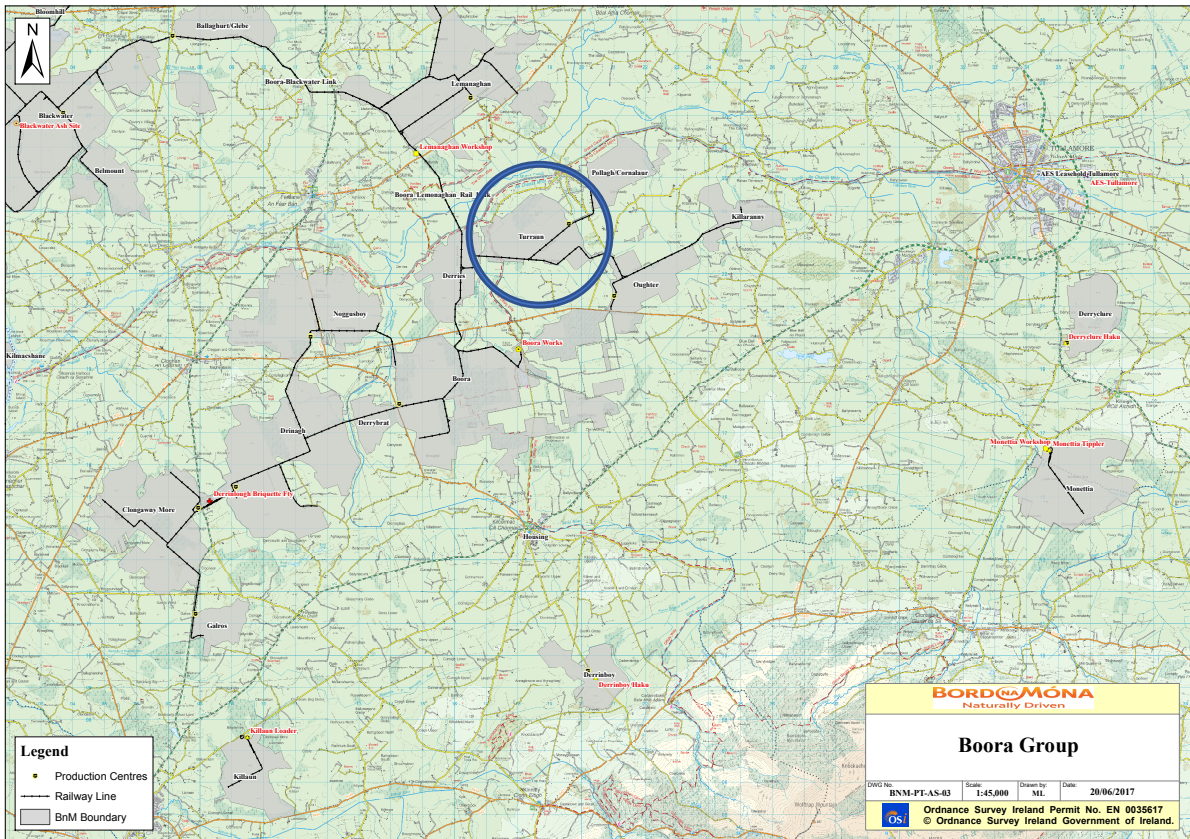
He explained that the soils he worked on in the Boora group were “woody fen peats” which had formed over “weathered subsoils”. These subsoils he explained had been exposed to the atmosphere prior to the peat enveloping them.

Raised bogs formed in lakes that had filled with organic debris. The bog rose higher as sphagnum mosses grew, died and failed to decay due to the waterlogged conditions. In time these expanding ecosystems would ‘spill out’ across the landscape. Such peatlands were described by Bellamy (1986: 55) as ‘ridge-raised bogs’. Underneath the advancing bogs lay soils which had been exposed to the atmosphere. Once the peat above these was eventually cutaway, the ancient substrate would once again be exposed. It is soils like these which can be utilised for agriculture. Barry described their physical characteristics as ‘free draining’ and ‘structured’. To utilise the weathered soils deemed suitable for agriculture, Barry said that they would be “deep-ploughed” and mixed with the residual peat, creating a “friable soils structure [which] allowed... water to penetrate downwards.” The deep ploughing process also broke the pan (mineral layer) that existed between the peat layer and the soil layer which had previously impeded drainage. This is how BnM ‘reclaimed’ the cutaway bogs for grassland around Boora. Barry said the eventual size of the area reclaimed was 3,000 hectares, with 2,000 ha of this becoming grassland. This is far less than the 68,000 ha envisaged by Brian in Mike Murphy’s film. Most of the reclaimed land was in the bog groups of Boora, Clonsast and Derrygreenagh in Co. Offaly and Bellacorick in Co. Mayo.

Although technically feasible in the right locations, converting cutaway bog into grassland was not without its challenges. Large boulders would be unearthed during the reclamation process and required removal. The soil would also need fertilised with lime. Cattle reared on Lullymore cutaway bog in the 1970s were found to be deficient in copper, and had to be supplemented (Clarke, 2010). Barry explained that the presence of molybdenum in the landscape induced copper deficiency in livestock and it had to be counteracted. This increased costs. Moreover, there were problems encountered with large ‘black oaks’² that had fallen into the wet soil and had been slow to decay due to bogs’ chemical characteristics which prevent biological breakdown. Barry said these trees were often between 40 and 60 feet long. He explained: “You couldn’t leave them in the soil because once the soil started to drain, they would work their way to the surface, very quickly... They posed a huge threat to machinery... You couldn’t cut silage or anything like that because if you hit a black oak, as we term them, it will reshape the machine... And the machine is useless after that.”

Barry's testimony demonstrates the heterogeneity of Irish bogs. Variations can occur even within small peatlands. For example, Scragh Bog SAC in Co. Westmeath, at just under 24 ha, contains several peatlands types: fen, fen carr (wet peat woodland) and raised bog (Natura 2000 standard data form for Scragh Bog SAC, IE0000692). Conditions present on cutaway bogs vary to similar degrees, based on factors including the extent of residual peat, the site's topography, as well as the characteristics of its subsoils. This has implications for the type of after-use that can be applied post-production. Furthermore, drainage is an important factor to consider in after-use decision-making. Barry explained that half of BnM's lands are drained by gravity (i.e. they are higher than their surrounds), while the other half must be drained by mechanical pumps (i.e. being lower than their surrounds and subject to hydrological inflow). Most weathered subsoils are gravity drained.

Weathered mineral soils are in contrast to the 'silty-blue clays' found in the former lakes which once birthed the raised bogs. Barry described these as 'amorphous in structure' and 'unweathered', as they had never been exposed to the elements. He added that shell marl is "quite extensive on the Bord na Móna bogs." This he remarked it is powdery and lacking in structure, with "very poor trafficability," meaning machinery traveling across its surface would easily sink into it. Barry said that shell marl is "generally underlain by silty-blue clays." Nevertheless, some of this had been reclaimed successfully in Turraun, a bog in the Boora group, which had areas of silty-blue clays overlain with reed peats. Barry didn't specify why this had been the case, but it appears to be an outlier. He said, "In the main, those reed peats don't make a good... quality structure for soil development into the future... One huge problem with them is they tend to dry out and fissure and crack *extensively* [emphasis]. And those cracks can be a metre or two wide, so you can imagine farmland surface like... the Kalahari desert surface. So that would be a lot of our soils."



Map 10.1 Bord na Móna Boora group of bogs Turraun bog is encircled in blue. Floral development following the end of production at this site would eventually lead to the creation of the Lough Boora Discovery Park. Map supplied by Bord na Móna.

I visited Turraun (map 10.1) with Barry to view first-hand the farmland reclaimed from the cutaway in the 1980s. Barry described the landscape: “Turraun would be a low lying area... It would have had a shell marl influence, overlain by reed peats... The shell marl quite literally lies on the landscape [completely] flat, whereas your weathered subsoils tend to be very undulating, so you get a mixture of peat depths.” Barry explained the value that the flat subsoil had at Turraun: “What that meant in effect is Bord na Móna can harvest the peats quite close to the shell marl.” This tends to be an favourable substrate for after-use. Barry said, “[Shell marl] has a pH of about 12 to 15 – very high molybdenum toxicity, so we very quickly ruled out... that sort of scenario as... being suitable for forestry.” Barry then qualified the statement somewhat, by stating, “Some trees have done well on shell marls to an extent.” Moreover, unweathered soils more generally tend to limit after-use options. Of Turraun Barry said: “We were working on this for a long time to see what potential these silty blue clays would have, and they were proving quite difficult... in tillage, etc. But once we put them into grass, they’ve turned into quite good grassland... It has maintained itself very well, and is now farmed by

local farmers.” Barry added that there had been drainage difficulties when the land had previously been under tillage, but once it had been turned into grassland the roots worked their way into the silty-blue clays and it had remained free-draining ever since. This unlikely success further demonstrates the unpredictable nature of peatland.



Plate 10.1 Farmland at Boora, Co. Offaly Much of landscape in Boora is reclaimed cutaway bog. Just visible in the centre of the image are curlew (*Numenius arquata*) feeding in the pasture. These birds are red-listed and in danger of extinction as a breeding species in Ireland.

I asked Barry if he considered the reclamation efforts (see plate 10.1) as successful. Hesitating initially, he answered:

I would, yes. But what I would have to point out is it was done on the best [deep breath] available quality lands Bord na Móna owned. Bord na Móna owned an estate of 80,000 ha, and of that... I couldn't give you a precise figure, but what I described as... the weathered subsoils overlain by those woody fen peats to a large extent, it probably would only account now for, we realise, for about 10%, maybe 15% of our estate.

Industrial cutaway bog suitable for farming is therefore a relatively scarce resource. I asked Barry whether it had been a profitable enterprise for BnM. He responded: “We were trying at best to break even... that would be as far as we would have got.”

In his 1980 report, Mike Murphy raised the issue of ownership of the reclaimed land with Brian. Murphy believed that farmers would want the land, given that it had been theirs to begin with. Brian argued that it had simply been a ‘waste’ and that it had been reproduced anew by BnM, and that he felt it was rightfully theirs. This perspective changed however, as Barry went on to explain:

Eventually we became confident that it could be sold on, and obviously finances were coming into the [equation] as well because it was a costly process. The land reclamation, the deep ploughing, was a very expensive process – probably costing in the region [deep breath] of IR£1,500 or IR£2,000 an acre, plus. So it became... change of policy then... we decided... Bord na Móna decided to stop farming.

Barry said that the reclaimed farmland was put up for sale and much of it was bought by locals. He said it helped adjacent farmers who had been corralled into working on the mineral soils of Leabeg Leamore (an area within the Boora group). Reflecting, he remarked: “It was a very good supplement to local farmers, and they’re still farming it today and [are] very happy with it. It can be described as reasonable quality grassland in the current day. It has stood the test of time.” Nevertheless, Barry conceded that the land had probably been subject to further ‘improvement’ with mineral and slurry application in the years since these landscapes were originally produced. With reclamation for farming proving expensive and only possible in a limited range of cutaway bogs, something new had to be developed.

This section discussed the conversion of cutaway bog into agricultural land. It identified that a specific type of peatland was feasible: weathered subsoils that had been engulfed by ridge-raised bog. This made up a fraction of BnM’s overall landholding. Moreover, its conversion proved expensive. BnM has since abandoned the idea of converting its cutaway bogs into agricultural land. In the next section, forestry as an alternative use for the cutaway bogs is discussed.

10.3 SILVICULTURE AND BIOMASS IN THE CUTAWAY

Alongside agriculture, silviculture on cutaway bogs had long been considered a desirable after-use. Forestry trials had taken place during the 1950s at the Clonsast group of bogs and had proven relatively successful (Mooney, 1958). During the mid-1980s, Barry said that forestry once again emerged as a key after-use for cutaway bogs. Bellamy (1986) advanced a vision for a forestry system on the bogs not based on hardwoods. In this, trees would not be clear-felled, but instead coppiced or pollarded. This, he argued, would provide sustainable timber yields without upending the soil, therefore limiting the erosion of the peat. The resulting commodity could be burned in power stations to provide energy. A conifer-based forestry system would be adopted instead. Bellamy's model would be trialled at a later date, albeit unsuccessfully according to Barry (22), as yields were considered insufficient and therefore not economically viable.

New thinking around forestry coincided with the establishment of Coillte Teoranta, The Irish Forestry Board Ltd., under the Forestry Act, 1988. Barry recounted the changes at the time: "From the mid-Eighties onwards there was a large emphasis on forestry. There was a demand made by the government really in about '84/'85 that any available Bord na Móna cutaway [bog]land should be planted with Sitka spruce forestry. And Coillte came into play. We were... dictated to, to lease our lands to Coillte for the purposes of forestry planting." Barry took a deep breath and continued, "And between probably '85 and '88, or somewhere towards '90, there would have been over 4,000 ha of our estate planted with coniferous forestry." Barry said that BnM's role in the afforestation of its cutaway bogs was limited and its attention remained focused on agriculture. Coillte instead had responsibility for the husbandry of the tree crops. Despite BnM's hands off role, Barry had detailed insight into its progress. He described the challenges encountered in early development of forestry on industrial cutaway:

I think it was around the years '86, '87 we had a phenomenon which we hadn't [had] in Ireland [in] maybe 40 years... where we had a very, very severe summer frost... And it absolutely destroyed the young plantings of Sitka spruce... It literally *burnt* [emphasis] the young Sitka spruce plantings black, and in the process, you could have killed the 'leader' and done severe damage to the structure of the tree.

Barry defined 'the leader' as the lead shoot of the tree. He explained that if it got damaged, the eventual adult tree would end up deformed. These frosts occurred two years in a row, which

Barry said “threw the thinking on forestry back huge.” He described the midland bogs as “frost pockets”, as many lie lower than the surrounding landscape. To exacerbate this, he explained Ireland can get a mild early spring which stimulates tree growth. However, a sudden late ‘cold snap’ in the late spring can kill off shoots which had emerged in the weeks prior. Other problems arose as Barry explained: “What we learned very fast... the peats... you’re talking about peats then coming... straight out of production – they had no soil formation, they had no growth on them, and they had absolutely no nutrients. They would have had nitrogen obviously – they would be organic, but they would have had no phosphates whatsoever and their potash levels would have been very low as well.” In any given situation where a substrate is of low nutrient value, fertiliser is applied. But this has its own drawbacks as Barry recalled:

Coillte [applied] fertilisers, and slow-release phosphates, but what that lead to immediately was... over the first winter, it lead to a monoculture growth of soft rush – *Juncus effusus*. The trees were planted in... the spring of the previous year, they were fertilised maybe in the summer, and they were sitting in the ground then waiting to grow the next year, but the *Juncus effusus* grew profusely once the fertiliser was added.

By the following spring, Barry said, “You literally had a crop of rushes *higher* [emphasis] than the planted trees... They were doing fierce damage.” Between the summer frosts and the growth of rushes Barry concluded: “It became apparent that growing forestry on the cutaway bogs was going to be a difficult proposition. It was a very desirable proposition from a national point of view, but in practice it was going to be... very difficult.” Barry recalled how BnM and Coillte cooperated on research to overcome these challenges. The concept that emerged was to find a species that would not be impacted by frosts. Norway spruce was selected according to Barry because “it shoots out later, so it might be less prone to frost.” However, it had one two drawbacks he explained: “The problem with Norway spruce is it generally tends to sit for a few years before it takes off in growth, thus the problem of *Juncus effusus* smothering it out.” To counteract this, Coillte came up with a novel solution. Barry said they would split the application of fertiliser. However, this he said, meant more management and therefore increased costs. The second problem Barry said was that when the trees grew above the level they could be impacted by frost, they would undergo “a surge of growth.” What appeared to be a welcome development he said “caused a deformation... on the trunk of the trees.” This meant that at harvest time the crop produced “less percentage of saw log.” Reflecting, Barry remarked: “Initially, I suppose, Coillte did have the opinion that they’d literally plant the area

and leave it to its own devices until it grew into forestry, but instead it became apparent quite quickly it was going to need intensive husbandry to nurture the crop through.”

One of the key findings from the forestry trials related to peat soils’ ability to retain phosphates as Barry explained: “What became very apparent was that... peat does not have the ability to hold onto phosphates, even slow-releasing phosphates. And generally phosphates that are put into peat finish up in the water courses, so that is not desirable.” Barry took a deep breath and continued: “But it also meant in... year 12, maybe 15 onwards, the tree started to run out of nutrients. Now Coillte addressed that for a number of years with aerial application of nutrients on peat soils, but obviously as it became more environmentally-conscious, [as] these phosphates were running into water streams, that was ruled out. So a secondary application of fertiliser wasn’t possible.”

Research into forestry on cutaway bog continued. Beginning in 1997, a study called ‘Bog Forest’ (BOGFOR) aimed to address “the challenges and problems of establishing forests on industrial cutaway peatlands in the Irish Midlands” (Renou-Wilson et al., 2008: vii). Gillian (18) described the project as a collaboration between BnM, Coillte and COFORD (National Council for Forest Research and Development), the research wing of the Forest Service. The results were mixed. Gillian said the project took considerable time because “trees don’t grow fast.” The research involved planting experimental forestry on 200 ha of bog (Renou-Wilson et al., 2008). It concluded that successful afforestation of cutaway required detailed planning, the selection of sites suitable and the use of husbandry methods appropriate to the chosen location, its conditions and the species selected. BOGFOR further emphasised the heterogeneity of peatlands, where “small-scale variation in these site types greatly influences the establishment and growth of trees and has consequences for the choice of silviculture practices (Renou-Wilson et al., 2008: vii).” The BOGFOR study concluded that Norway spruce was the most favourable tree crop for use in cutaway due to its resistance to late-spring frosts (Renou-Wilson et al., 2008). Woody-fen type peats proved favourable, with sphagnum peats the opposite. Moreover, productive capacity was limited by poor drainage. The findings confirmed that only a ‘proportion’ of cutaway would be suitable for afforestation.

Gillian (18) reflected on the BOGFOR study: “You have to have [suitable] conditions. And people didn’t understand that. They wanted to apply a recipe for the whole bogs (sic). And each bog was *unique* [emphasis] and that’s what we found. If anything, what we found is each

bog is so different that you can't apply any blanket recipe for *any* [slight emphasis] bogs, be it raised bogs or blanket bogs." Gillian took a deep breath and concluded: "We found there was a lot of problems with everything, but... where we found the conditions, and I did... you will be able to plant in some sections of, for instance, dry remnants of cutaways that you cannot do anything with – you cannot rewet, you cannot restore... maybe yeah, forestry could be done with certain conditions."

Other after-use options for the cutaway have been trialled. These have been small in scale, and include cranberry cultivation, birch water production, fish farming and medicinal herbs production. All were eventually deemed uneconomic. However, one after-use employed in Germany and Canada, but which was never been fully explored in an Irish context, is paludiculture. This is the cultivation of crops from rewetted peatlands. Waterlogged conditions present in paludiculture enables peat accumulation (Wichtmann and Tanneberger, 2011). The biomass produced can be used in various ways including as biofuel, in paper production and as roof thatch (Wiedow and Burgstaler, 2016). Oehmke and Abel (2016) identified a number of species that can be used in paludiculture. These include common reed (*Phragmites australis*), reed canary grass (*Phalaris arundinacea*), various sedges (*Carex*), black alder (*Alnus glutinosa*) and an assortment of sphagnum mosses. However, they acknowledge that these species are suitable for Central Europe. They may not be suitable for the Irish climate or its cutaway bogs. Nevertheless, there is a commitment in the National Peatlands Strategy (National Parks and Wildlife Service, 2015: 66 Action 10) to 'explore' paludiculture, especially the cultivation of sphagnum mosses. Gillian (18) said that there had been no progress made on this commitment.

Paludiculture has merit when considered in the context of just transition. If successfully developed, it would enable peat workers to continue extracting a resource from the bogs, albeit in a sustainable fashion, given that biomass crops can regenerate. BnM has grown biomass crops on its land (see plate 10.2). However, these were grown on dry cutaway. Barry (22) deemed these stands as uneconomic. Yields are low and there was significant capital expenditure to reclaim the cutaway bog they were grown on, for they are not viable on 'raw' cutaway. Elaine (13) said that BnM had carried out other biomass trials including the growing of birch trees and rushes on cutaway. She concluded this was neither scalable nor commercially-viable. She contended that growing crops had worked in Germany because the peat substrate was nutrient-rich, unlike the cutaway bogs of Ireland. Elaine is sceptical of the

idea of cultivating the cutaway, but concluded by saying it may be possible on Irish fens. Gillian (18) argued that further research into paludiculture in Ireland was needed, however this required funding.



Plate 10.2 A stand of willow on reclaimed cutaway, Boora, Co. Offaly Barry said this short-rotation coppiced biomass crop had been harvested four times following its development in c.2002. It is burnt for energy generation in the Edenderry power station. However, it only produces half the yields it does on mineral soils.

This section revealed the challenges inherent in growing woody plants in the cutaway. The characteristics of the Irish climate and the physical chemistry and structure of peat soils have made them largely unsuitable for silviculture. Similar to agricultural conversion, high costs were associated with forestry activities on cutaway. Commercial forestry on cutaway bogs is no longer part of BnM's after-use vision. Moreover, growing biomass like willow is not economically viable. In the next section, non-commercial use of these post-industrial landscapes in the form of Lough Boora Parklands is examined.

10.4 THE DEVELOPMENT OF THE LOUGH BOORA PARKLANDS

Following the challenging experience of establishing profitable agricultural and forestry in cutaway bogs in the Boora bog group, new thinking began to materialise. In time, this would result in a landscape unrecognisable from the industrial space that preceded it, rich in wildlife and enjoyed by tens of thousands of visitors every year. Yet what emerged required subvention from BnM and would not be replicated by the company elsewhere. This next section charts the development of the Lough Boora Parklands (LBP). Its story begins at Turraun bog.

10.4.1 Turraun: A ruderal ecology

The origins of the Lough Boora Parklands (later the Lough Boora Discovery Park) can be traced back to Turraun bog (map 10.1). Like the Clonsast bogs surrounding Walsh Island, Turraun is historically significant given its utilisation at the dawn of Irish industrial peat production. Collins and Goto (2020) outlined how farmer Kieran Farrelly produced sod peat for heating and moss peat for livestock bedding at the site during the nineteenth century. Sir John Purser Griffith of Wales, the Chair of the British Fuel Research board, purchased the bog in the early 20th century and set about commencing industrial peat extraction there, which Collins and Goto contend influenced the decision to establish BnM's predecessor, the Turf Development Board in 1934.

Conversations with Barry about Turraun revealed an unintended consequence of Eddie O'Connor's "rationalisation" (see section 6.2) of the workforce:

Turraun was neglected or was let go out of peat production and wasn't looked after. And like typically in a Bord na Móna scenario you would have the manager and his team looking after the bogs... and one of their primary things off season would be to keep the bogs clean, ready for production the next year, free draining, everything like that. So, a combination of things – Bord na Móna downsized there around the 1990s, maybe to half its labour force under... rationalisation.

Barry explained that the lack of manpower at Turraun meant that nature began to resume control: wind filled in the drains, water began to collect and vegetation started to grow. He said while much of Turraun's substrate was silty blue clay, overlain with shell marl and then reed peat, about half was made up on free-draining weathered subsoils. A variety of plant-life developed and this became of interest to Barry. He recalled writing a thesis on Turraun as part

of a diploma in field ecology. His research identified an emerging mosaic of habitats. Barry remarked: “It didn’t form a monoculture of anything, but it had, depending on the conditions, it could have an area of birch and willow scrubland, it could have an area of *Molinia* grasslands, ranging to an area of *calluna*, the heathers, to open floral [hesitates] stands. So we did a plant count and a classification of the plants and we came up with a vast number.” With such a variety of plant species and habitats, wild animals would soon colonise this space, as Barry explained:

At the same time it became quite apparent that wild fauna were moving in to the site as well, particularly birds. So, in [brief hesitation] ’91 we made the decision to block up the drainage from the low-lying areas of Turraun – and it was our first attempt at that in any sort of large scale. So we dug up all the exit drainage from Turraun and allowed it to reflood naturally. We built embankments to retain the waters.... Once we had a stand of water on it, we had an absolute... influx of bird life in particular.

Barry described the various species that arrived, including wild geese, ducks and waders. Whooper swans (*Cygnus cygnus*) began using the newly emerging wetlands. Ornithologists were brought in to survey, including Dr. Brendan Kavanagh, who identified one of Ireland’s last populations of grey partridge (*Perdix perdix*) living in and around the Boora bog group. This discovery would lead to conservation project to save the birds from extirpation (later discussed in section 10.6).

Barry claimed that Turraun remains an important indicator of what form cutaway bog landscapes will take in the future as more recover from peat production. Parallels can be drawn with Stoetzer’s (2018) concept of ‘ruderal ecologies’ when consider these landscapes. Drawing on the work of Grimes (1977: 1183) who defined ‘ruderal’ spaces as areas where flower plants had adapted to “persistent and severe disturbance”, Stoetzer (2018: 297) defined ruderal ecologies as “communities that emerge spontaneously in disturbed environments usually considered hostile to life.” Post-industrial bogs which had their peat partially or even completely removed and which were difficult to utilise could be considered examples of this.

10.4.2 The Parklands emerge

In the early-90s Barry recalled BnM’s withdrawal from the >1,000 ha Tumduff bog. He recalled (pers. comms. 28/07/2021) that production there had slowed in the late-1980s and

finally ceased by the mid-1990s. Barry explained that this was an important part of the development of the LBP project:

It would have been the first large-scale area that Bord na Móna would have completely ceased peat harvesting on. On a bog up to that [point] you would have large areas of cutaway, but it would still be dictated to by peat production rules – there had to be drains, there had to be railway lines in it... peat was going on in certain areas, so what was abandoned was abandoned, but the rules for peat production carried on. So this area became the first area in Bord na Móna on a large-scale... that would have no requirements, and Bord na Móna... had [come] under the structure of the EPA [IPC] licence agreement at that stage, and part of that was the bogs had to be decommissioned. So that meant removing all the installations that were on the surface of the bog – that would have included the railway lines.

Barry said that many of the people he worked with at the time had interests in outdoor activities and wildlife. This led to the formation of a committee of eight called the Boora Enterprise Group. It applied to the LEADER scheme for funds to develop an angling lake. Barry recalled that some in the group had “bigger ideas”. These were outlined in a pre-feasibility study that Barry himself coordinated.

The pre-feasibility study produced by the Boora Enterprise Group (1994: cover page) was in its own words, “a plan for the total integrated use of cutaway peatlands at Bord na Móna, Boora, Tullamore, Co. Offaly”. It was a bottom-up approach led by workers to repurpose a vast area of post-industrial peatland for the greater good. It would eventually incorporate 2,225 ha of cutaway bog out of the Boora complex’s 8,100 ha landmass. The amenity that emerged aimed to increase tourism to Co. Offaly and replace job losses “in the declining peat industry as the peat resource becomes exhausted (Boora Enterprise Group, 1994: ii).” Employment estimations were modest however, with between five and seven people employed at any one time in the first 30 years of the development. This is in stark contrast to the 200 permanent and 80 seasonal jobs that existed in the bog group c. 1997 (Riordan, 1997: 52).

Barry described how the LBP project progressed through time following the development of the initial 1994 vision. The first actions included lake and walkway creation. Barry explained that there was some patience required before ‘nature’ returned to the dug-out waterbodies. Plants were introduced a number of times which stabilised the lakes, and fish were released.

These would eventually be utilised and operated by community groups. Barry explained that Loch Clochan, near Cloghan village, was managed by the local community and was positioned as a “tourism enterprise”, while Finnemore’s lakes near Boora was run by a local fishing club. However, this has not been replicated, much to Barry’s regret: “Unfortunately Bord na Móna have never gone ahead and developed any lakes since, which is an awful pity in my opinion, but... we haven’t.” I asked Barry why this was the case. He answered, “Maybe due to work intensity cost. They were expensive.” Budgetary constraints would curtail the types of landscape that would emerge from the cutaway.



Plate 10.3 Lough Boora Discovery Park Railway routes have been repurposed at Boora so as to provide amenity access for tourists and locals into the post-industrial landscape.

Although LBP was positioned for environmental tourism (see plate 10.3), the pre-feasibility study outlined that the landscape would nevertheless remain in commercial use. 1,200 ha would be planted with commercial coniferous trees, 400 ha was earmarked for farming pasture (300 ha had been completed at the time of publication of the report), non-commercial hardwoods would comprise 280 ha and 14% of the land would be utilised specifically for amenity (Boora

Enterprise Group, 1994). In sum, 1,600 ha of out the 2,225 ha of the Parklands would be utilised on a commercial basis (see map 10.2). If successful, this would ensure environmental, economic and social sustainability. I asked Barry if he encountered resistance to his plans. He answered:

Certainly scepticism, but not resistance. It was seen always... kind of a flag bearer from the start. ...Winning a few prestigious awards early on was a huge help to the status of the project. ...That then gave it a bit of a profile that Bord na Móna, when they were going to Europe say, for projects or whatever, they always wheeled out the Boora project, so it was important from that context.



Map 10.2 Lough Boora Parklands The original proposed layout for the Lough Boora Parklands. Source: Lough Boora Parkland’s Pre-feasibility study (Boora Enterprise Group, 1994)

Barry added that LBP was positioned as a “national centre for peatland rehabilitation”, and that “there was no better at the time.” However, Barry recalled there was an air of uncertainty as to whether or not people would actually visit the Parklands. He said: “One of the debates we had for a long, long time – would people ever come back in here to walk? Was it a flat, old, dull,

plain landscape?” Barry and his colleagues set about ways to ensure that LBP was attractive to visitors. He said: “We were looking at various ways of making the place interesting... And the people... numbers were coming. Things we debated about – would you ever see a mother down with her buggy and her children taking a walk? And all of a sudden they were doing that. And they were loving it. Every reaction we got back was very, very positive. And as I said, Boora kept winning awards.”

This section outlined the development of the Lough Boora Parklands (later the Lough Boora Discovery Park). The concept of LBP emerged from the abandoned Turraun bog. Following the redundancies arising from Eddie O’Connor’s rationalisation of BnM in the late 1980s/early-1990s, a reduced workforce was unable to maintain the bog. Vegetation regenerated and inspired a new vision for the cutaway landscape. This instigated the worker-led development of the Lough Boora Parklands. In the next section, other visions for the cutaway which emerged in the mid-1990s are discussed.

10.5 RETHINKING THE CUTAWAY

In May 1997, stakeholders gathered at St. Joseph’s Community Centre, Kilcormac, Co. Offaly, to discuss the future of BnM’s landbank. The Future Use of Cutaway Bogs conference presented a range of visions, some new, others already implemented, pertaining to the after-use of industrial bogs. Proceedings from the event was published the following year and provide for a useful account of how these landscapes were valued and understood at the time. In this section, several notable contributions are discussed.

In the first presentation, Feehan and Kaye (1998) called for a space for wilderness once the bogs were cutaway. They began by describing ‘the new county’ that had been expected to emerge once the bogs’ peat resource was exhausted. Economic considerations would play a key role in deciding their future. Those lands which were considered uneconomic for development were the focus of Feehan and Kaye’s (1998) contribution. As they explained (*ibid*: 7), this space was increasing:

In an earlier, more naïve time – not so long ago either – we had pictures of new productive land the size of Louth becoming available to us. But today we have the benefit of half a century of experience to learn from and we know that earlier figures for the extent of cutaway bog that

would be suitable for farmland were overly optimistic, and the boundaries have contracted around the area of potentially productive land on our notional map of the future cutaway landscape. So too early optimism about the potential of cutaway bog for commercial forestry has proved to be ill-founded.

Following a review of the various after-use models, Feehan and Kaye (1998) argued the high cost of the LBP which would limit its potential to be replicated elsewhere. It would also be too expensive to regenerate bogs in all but the most suitable of places, where it would be encouraged rather than forced. They believed that there were “powerful arguments” to allow “...non-productive cutaway to develop spontaneously in the ecological direction for which its natural character is best suited, where natural ecological processes of succession and ecosystem establishment are allowed to dominate and human interference is minimal (ibid: 8).” This working *with* nature modality was prescient. On my fieldtrip with BnM ecologist Frank (6) during the summer of 2019, he spoke of his willingness to work with rather than against natural systems. In allowing nature to take control, with light touch by humans to remove invasive species for example, a mosaic of habitats would emerge. According to Feehan and Kaye (1998), these would include acid grassland, bog remnants, scrub, woodland containing pine, willow and birch, fenland, marsh and open water. This nature-first ‘wilderness’ would attract visitors, crucial for sustaining small communities otherwise blighted by unemployment following the slow closure of the peat industry. Nevertheless, it would be unlikely to replace the jobs which had been lost in BnM.

A BnM vision for the cutaway was presented by its Land Development Manager Gerry McNally (1998). His contribution was characterised by emphasising *difference* between boglands. He asked, “What is cutaway bog? Is it all the same, can it be packaged in a box, like any commodity, say Mars Bars, all neat and exactly the same? Well I can tell you it is not and having worked for many years with it, understanding the complexity of what is left behind is the key to understanding what can be done (ibid: 14).” He spoke of the influence of different substrates underlying residual peat deposits which lead to different after-use options. Emphasis was placed on drainage; McNally stated that bogs to the west which drained into the Shannon tended to require mechanical pumping in order to remove their water whereas bogs located in the east that drained into rivers Boyne and Barrow tended to empty through gravity. Drainage scenarios would limit options: “In the case of pumped drainage the costs incurred to sustain it are unlikely to be supported by returns from farming or forestry (ibid: 15).” McNally (1998)

concluded that grasslands would be the after-use option for between 20% to 30% of BnM cutaway bog, forestry would be between 50% to 60% and that between 20% and 40% would be converted to wetlands. However, he emphasised that these plans could change: “What I want to say is none of those figures are written in stone. I am putting those figures to you today, 1997. The peatlands will not be cut out for the next three decades and the perceptions of what is important or what is necessary may change over that period (ibid: 16).” This latter point made by McNally is instructive. Within a decade their ability to retain carbon would alter perceptions of these spaces.

Others at the conference contributed to familiar debates around agriculture and forestry. Tom Collins, Chief Agricultural Officer for Co. Offaly, advocated for “using some of the reclaimed peatlands as grasslands for re-structuring farm holdings in the hinterlands of the peatlands” (1998: 17). Collins argued the grasslands produced from the cutaway bogs should not be sold off to large-scale operators. Rather, he contended, they should be offered to struggling farmers with small landholdings, that were willing and able to farm them in such a way as to be economically viable in the long term. However, Collins failed to acknowledge the cost of converting cutaway bogs to agriculture (see section 10.2). Jones, Boyle and Farrell (1998) presented a paper on utilising the cutaway landscape for forestry. They explained how 4,000 ha had been planted Coillte since 1988 and that 76% of all trees planted in the midlands were Sitka spruce. An unpublished report for Coillte by Lynch and McGuire (1993, in Renou-Wilson et al., 2008) found that 41% of these trees had failed entirely. Nevertheless, Jones, Boyle and Farrell (1998: 24) remained optimistic and argued that “forestry on cutaway bog may be a viable prospect if the causes of poor growth rates and survival are identified and addressed.” Further research was discussed that was specific to producing forestry on milled cutaway; this would culminate in the BOGFOR project (Renou-Wilson et al., 2008).

Further contributions were made concerning the value of archaeology, heritage and education. How much impact the event had is difficult to assess. Barry confirmed in personal correspondence (3/8/2021) that such an event was not held again. More than twenty years on, some options have been retained (wildlife) and others set-aside (cutaway conversion to agriculture, commercial forestry). However one vision emerged which would transform a large sector of the Boora cutaway. This is discussed in the next section.



Plate 10.4 Mute swans (*Cygnus olor*) at Lough Boora Discovery Park Rewetted cutaway bogs provide valuable habitat for wildlife. However, there is now a move away from creating open water habitat to keeping the water table at or below the surface in order to mitigate against carbon emissions.

10.6 THE GREY PARTRIDGE PROJECT

In this section, a notable biodiversity project taking place in the cutaway bog landscape of Lough Boora is discussed. It aims to conserve one of Ireland's rarest birds: the grey partridge.

Brendan Kavanagh's (1998) contribution to The Future Use of Cutaway Bogs conference identified the suitability of the cutaway bog landscape as habitat for birdlife (see plate 10.4). He remarked (ibid: 37): "While we might lament the loss of the vast Bog of Allen ecosystem, we can be pleasantly surprised and encouraged by the ecological diversity of the cutaway boglands, a rich new landscape for flora and fauna." Kavanagh argued that with the exception of the heather-dependent Irish red grouse (*Lagopus lagopus hibernicus*), Irish bog-dwelling birds could adapt to, and even increase their numbers, in renatured post-industrial bogs.

Barry (22) recalled that Kavanagh had raised awareness earlier in the 1990s of the presence of grey partridge (*Perdix perdix*) in the Boora bog group. Speaking of the birds 'precarious' existence, Barry remarked how "they basically survived along our railway lines, because we released the dry sands... to get friction for the trains, and the dry sands suited the craws of the partridge." Barry explained that the birds also utilised adjacent crops of corn and grassland. Efforts to conserve the birds in what would become the Grey Partridge Project have had mixed results.

NPWS manager Hugh (31) has had responsibility for the Grey Partridge Project since 2015. We spoke in a large open cutaway bog in the Boora group formerly utilised by BnM. It has been purposefully reconstructed and maintained in such a way as to preserve the red-listed grey partridge (Gilbert, Stanbury and Lewis, 2021). Hugh described it as "the most intensely managed block of ground in the country for grey partridges." He said the long term goal of the conservation project is to stop the total extinction of the grey partridge in Ireland. Hugh noted that the site inadvertently provides habitat for other birds, including skylark (*Alauda arvensis*), meadow pipit (*Anthus pratensis*), quail (*Coturnix coturnix*), whitethroat (*Sylvia communis*) and reed bunting (*Emberiza schoeniclus*). However, grey partridge, along with lapwing (*Vanellus vanellus*), woodcock (*Scolopax rusticola*) and snipe (*Gallinago gallinago*) are the main species earmarked for conservation.

The Grey Partridge Project has been running since 1996. The birds are conserved in a bowl-like depression surrounded by forestry. They are bred in two purpose-built pens at the location and released into the conservation area. Hugh recalled that in the 1990s, the birds were known at only two sites in Ireland: one in Rathangan, Co. Kildare, and Pollagh, Co. Offaly. He said the population at Rathangan had since died out. I asked Hugh why the birds had declined in the first place. He described the pressures grey partridges face. The destruction of hedgerows by farmers eliminated favoured nesting sites. Moreover, the spraying of biocides on crops frequented by the birds in summer killed off aphids; a vital food source for juveniles. Hugh said that the ploughing of fields in the autumn for winter crop sowing "robbed the birds of a food source." Furthermore, the ecological conditions created by people support an abundance of mesopredators including hooded crows (*Corvus cornix*), magpies (*Pica pica*) and foxes (*Vulpes vulpes*), all of which predate nests and sitting birds. Combined, these pressures had pushed the grey partridge, along with other farmland species such as the corncrake (*Crex crex*) to the brink of extinction in Ireland. Hugh is nevertheless sympathetic to farmers and their need

to generate a livelihood. He explained that incentives existed like the Green, Low-carbon, Agri-environment Scheme (GLAS) to support farmers develop areas of habitat suitable for the grey partridge.

The Grey Partridge Project's present day form began in 2006 when the 600 acres of cutaway bog we spoke at was bought by the NPWS from BnM at 'market value'. The project is funded on a day-to-day basis through the Biodiversity Department of the NPWS and Hugh's own budget allocation for the North East Region he oversees. Capital projects such as scrub clearance are funded by the state, notably through the plastic bag levy. Since assuming control over the Grey Partridge Project in 2015, Hugh said he has employed a more 'scientific' approach when making decisions. Anecdotal information is no longer relied upon as it was in the past. This approach ensures that the numbers of birds present are accurately identified. He calculated that there was 80 pairs of breeding grey partridges living freely in the conservation zone. Making reference to calculations made by the Game Conservation Trust in Britain, Hugh said that a population density of 18.4 pairs per 100 hectares was deemed satisfactory. The density at the Grey Partridge Project site worked out at approximately 30 pairs per 100 hectares. However, the birds face continual challenges. Hugh stated that grey partridges are under threat from a myriad of species including stoats, foxes, hooded crows, magpies, gulls, rooks, sparrowhawks and buzzards. Some of these are protected species, whilst others are not. A predator control regime is in place to curtail the numbers of would-be hunters.

Hugh defined predator control as the management of "species of animals that may impact on an animal that has higher conservation value." Barry described the regime as "serious predator control", and noted that "some people would object to that because [it] involved taking out... every form of ground predator, because the [grey] partridge are ground nesting." Hugh conceded that their actions interfered with natural processes. He outlined his own feelings on this: "I don't like the idea of killing some forms of wildlife to protect others... At the personal level, it's a moral dilemma – at the organisational one there's an ethical dilemma most certainly." The approach employed from one species to the next varies. Target species are shot or trapped by gamekeepers. Hugh explained: "[We've] got the finances to put into gamekeeping here, predator control – constant effort, seven days a week, every day of the year. Doesn't matter what the weather's like. Our lads are in here doing their traplines, checking what's going on." Ravens (*Corvus corax*) are not killed but scared off, while stoats (*Mustela erminea hibernica*) have not been deliberately targeted since 2017. Any pine martens (*Martes*

martes) caught are released on the spot if lactating or translocated if not. The results of this are conserved grey partridges, a large population of hares and some of the highest numbers of lapwing in Ireland. However, conservation efforts such as this are likely to incur significant costs.

Hugh explained that the Irish population of grey partridge had been supplemented with birds taken from Estonia as these had a similar genetic make-up to the Irish birds. From 2016/17 a decision was made to begin moving grey partridges out of their Boora conservancy stronghold. The aim of such efforts was to gauge the birds' viability outside what is a heavily controlled conservation site. Hugh said that in 2017 15% of birds bred were moved, with that number reaching 75% in 2020 and 100% in 2021. Hugh said he is unsure if this will work: "It's a toss-up whether they can survive out there or not... My guess... I'm pretty certain they won't. They need a high level of human intervention, and that human intervention comes at a cost. And that cost cannot be sustained by farmers or private landowners – it has to be... [borne] by the state, either through incentive or through running bespoke projects like this." He added: "The feeling is, between myself and the keepers, is that if you don't have intensive predator control outside, you're at nothing. If you don't have the crops and that variety of crops, particularly the crops that are going to give them shelter for the winter [then]... you're at nothing."

An assessment by Gilbert, Stanbury and Lewis (2021: 18) suggested that 'improvement' of agricultural land continues to impact on the ecology of grey partridges, with the species showing no sign of recovery. Furthermore, Hugh's testimony illustrates the broader ecological problem of 'mesopredator release' in the Irish countryside. With large predators like bears, lynx and wolves no longer present due to historic human persecution, and large birds of prey a rarity, medium-sized predators including foxes and corvids are at artificially high numbers. This has devastating consequences for ground-nesting birdlife. Without a rebalancing of Irish biodiversity and the expansion of suitable habitat, the long-term future viability of the grey partridge as a breeding species throughout its former range is in doubt. Yet the Grey Partridge Project clearly demonstrates that the emerging cutaway bog landscape has the potential to provide space and habitat for threatened wildlife. But its protection will be expensive.

This section examined the management of a threatened species in a cutaway bog landscape. It identifies both the challenges faced by the species, the role of the state in conserving it and its associated costs. However, it also demonstrates the potential of the emergent cutaway

landscape in providing habitat in a time of biodiversity crisis. In the next section, the ongoing development of Lough Boora Parklands is discussed.

10.7 THE DEVELOPMENT OF THE LOUGH BOORA DISCOVERY PARK

This next section outlines how the Lough Boora Parklands (LBP) evolved into the Lough Boora Discovery Park (LBDP). What began as an employee and community project developed into an tourist attraction, sculpture park and haven for biodiversity. Yet it has not been without its challenges. These are considered next.

10.7.1 The Parklands evolve

Barry (22) recalled that around 2000 Offaly County Council became involved with the LBP. It assisted the Parklands with funding. BnM had been developing gravel walkways but the council supported efforts to tar these paths instead. There was an ethos created at the time of accessibility, so that people of all abilities could have access. In time, Barry said, the Parklands would become a family-friendly, safe destination. Soon after, Freda Rountree, chairperson of the Heritage Council, suggested that LBP could host a sculpture park. In 2002, Barry organised a sculpture symposium with artist Kevin O'Dwyer. In the years that followed, outdoor art installations were developed and installed across the landscape (see plate 10.5). However, this process was at times acrimonious, with visions colliding (Collins and Goto, 2020). Barry explained that there had been a 'fall out' between stakeholders, but that, "We're all trying to fall in again." I asked Barry to explain the conflict that arose. He said that the artists "wanted to keep the park very pure for sculpture," while BnM were keen to develop tourism and other activities. This may have compromised the artists' purist vision concedes Barry. He remarked: "We were very successful for a number of years, under a lot of strains and tensions and a lot of cost and administration and getting international artists and [dealing with] differences of opinion [deep breath] – we managed to keep it going until about 2012." Crafts were also installed. Barry outlined that these may appear to be sculptures – he gives an example of the *Gathering of Stones* and the *Sky Forest* – but these did not qualify for such a descriptor as they were not curated – "You have to have a process," he explained.



Plate 10.5 Sky Train A sculpture by Michael Bulfin at Lough Boora Discovery Park. The preservation of industrial heritage is important to those who once worked these landscapes.

Despite its evolution, Barry acknowledged that the LBP “didn’t have a sense of *identity* [said with trepidation]. People, he said, were unsure if they were actually in parklands. From 2012, BnM began planning to construct a visitor centre. This coincided with a rebrand from the Lough Boora Parklands to the Lough Boora Discovery Park. Barry remarked: “It was an inspired choice... We had looked at it many, many times and it wasn’t feasible – it wasn’t economically feasible to run a visitor centre. So Bord na Móna decided to take on that cost. So we developed a joint project with Fáilte Ireland, and it was 50/50 funded.”

Lough Boora Discovery Park is now approximately 3,000 ha in size. It has greatly expanded its offerings. A privately run shooting range was developed on a nearby bog, birdwatching hides were constructed and car parking was improved. The visitors’ centre was built on the shore of Loch An Dochais, a small waterbody used by disabled anglers. Barry remarked, “I’d say [it] has doubled our visitor numbers pretty much overnight.” He continued, “Our visitor numbers now for the last five years have been consistently over 100,000 per annum.” The LBDP has enjoyed considerable success. In a 2018 competition organised by the Royal Town

Planning Institute, it was voted Ireland's 'best place' (Offaly Independent, 2018). Earlier that year it had won twice at the Irish Hospitality Awards including 'Best Day Out' (Bord na Móna, N. D.b). In 2015, the amenity won 'Best Environmental Innovation' at the Irish Tourism Industry Awards (Irish Tourism Industry Confederation, 2016). In a 2012 BioBlitz, 940 species were identified in the park, securing it second place in the competition (Lough Boora, N. D.). Yet while the amenity has contributed significant social and economic value for nearby communities, BnM has no plans to replicate its model elsewhere. In the next section, the reasons why are identified.

10.7.2 Challenges in the Parklands

In his analysis of human labour, White (1996: 173) argued: "Nature has become an arena for human play and leisure. Saving an old-growth forest or creating a wilderness area is certainly a victory for some of the creatures that live in these places, but it is just as certainly a victory for backpackers and a defeat for loggers. It is a victory for leisure and a defeat for work." The Lough Boora Discovery Park is this quotation manifest in the boglands. It provides amenity and habitat, but little direct employment. It generates a modest income, but not enough to cover its costs. These, and other issues are examined next.

Finance

The LBP and its later iteration, the LBDP, have presented BnM with a number of challenges. A principle concern for Barry is funding. It has received European funding in the past (see plate 10.6). The initial project was funded 50/50 by BnM and the EU. Raising money to maintain the amenity has been difficult. Barry expressed worry for its ongoing financing: "How long are Bord na Móna going to stay funding it? They're in crisis, is the only way you could describe the company – it is in crisis financially. It's losing its main source of revenue [in] peat."

Barry estimated that 100,000 people visit the park annually, 80% of which are visitors from Ireland, with the other 20% coming from abroad. Given the attention the amenity has received from its many awards, an increase in visitors is likely. However, this will push up maintenance costs. I asked Barry if he wanted 200,000 people to visit the park each year. He answered: "That's a very interesting question. From a local community point of view... yes. How do you cater for it in the Parklands? That is the challenge... and not compromise the park as is out there."



Plate 10.6 Financing the parklands The Lough Boora Discovery Park has received funding from the European Union. However, long-term financing remains a concern.

The central issue is funding. Barry calculated that each visitor contributes 50 cent to the LBDP on average. While entry to Lough Boora Discovery Park is free, it costs €4 to park a car. Barry explained that the cost of parking had been contentious, with opposition coming from locals. He added: “There is free parking on the outside car parks, so a lot of the local people would use those.” Parking fees are one of three revenue streams. The other two sources arise from franchised businesses located within the amenity. A privately run café opened in 2015. There is also a private bike hire business. Barry said these three revenue streams fund half of the park’s running costs for the year, while BnM covers the balance.

Carbon emissions

Significant parts of the Lough Boora Discovery Park are dry, and therefore emitting carbon dioxide into the atmosphere. Barry said: “All the Bord na Móna residual peats will probably, to a large extent, be oxidised, releasing their carbon into the atmosphere.” Even with rewetting, which slows carbon release, he has concerns that methane will be emitted due to fluctuations

in the water table. Barry explained that some areas cannot be rewetted due to topographic changes in the landscape arising from peat production.

George (32), a BnM ecologist, evaluated efforts at the LBDP: “There was community groups involved. It has been an absolute success, but... a lot of it is dry.” He continued:

There was no particular systematic drain-blocking ever done at Boora. And Boora had some very, very deep drains dug. There’s a very deep drain that runs right through the centre of the site, the deep trench drain, and [that was] never blocked. So the site is dry, but of course, the main objective at Boora is kind of gone beyond rewetting and carbon storage. I mean, there’s a huge amenity value now at Boora.



Plate 10.7 Cutaway bog A dry cutaway bog landscape with scrub developing in the background. George, a BnM ecologist, acknowledged that carbon continues to be emitted from such sites.

The dry areas of peat (e.g. plate 10.7) described by George emit carbon. He remarked: “The only thing that really sequesters carbon is active bog. All the other degraded peatlands will be carbon emitters, including where you have woodland.” George said there was scope to rewet

some areas of the LBDP. However, he contended that there are some spaces in Boora that are wetter than they may initially appear: “Sometimes you’d be quite surprised that when you go into a bit at Boora – it looks dry, but actually there’s still quite a lot of water in the drains.” George concluded by suggesting that the LBDP merely needed ‘tweaking’. He noted the livelihoods that have built up at the amenity and the communities that now depended upon it. However, a dry peatland could also pose a danger to those very same communities.

Conflagration

As well as part-financing the LBDP, BnM must also protect it. Fire is an ever present danger in the dry cutaway. One ignited at the site in 2020 (plate 10.8).



Plate 10.8 Evidence of fire hazard, Boora, Co. Offaly Fire destroyed part of the Lough Boora Discovery Park in 2020. Barry said it took two weeks to fully extinguish. Dry peat, vegetation and an ever-warming climate pose a risk of conflagration in the cutaway bog landscape.

Conflagration can occur on BnM land for many reasons as George explained: “People will burn off areas... particularly where they have turbary rights for harvesting domestic turf, which we have around the edge of many of our bogs. People will burn off areas of scrub, and then that can catch and get going into... other parts of the bog.” George also implicated campfires, barbeques and even arson as reasons why fires occur. He said that this can put homes near the bogs in danger and noted that BnM has had to cut firebreaks in the past. He recounted an anecdote where an explosives factory had been put at risk from a fire that had progressed to within 500 metres of the plant. Lastly, George stated that the risk posed by bog fires could be exacerbated by climate change should Ireland experience long dry spells of weather. Barry expressed similar concerns: “One I’d be particularly worried about is fires... There’s a huge potential... for fire risk into the future.” He added, “And management of fires on bogs is a huge

issue, and only Bord na Móna are capable of doing it at the moment. But when Bord na Móna goes, local authorities are not capable of managing it.”

Rewetting cutaway bogs could conceivably halt the risk of fires. Barry said: “Bord na Móna are talking about creating them into wetlands... [sighs] I’d have to dispute that... 50% of our bogs were pumped, so they can be flooded, probably 25% more of our bogs can be flooded, but there’s 25% that cannot be flooded.” This would mean over 20,000 ha of land would be dry. I enquired which of bogs were in this category. Barry said there were the “higher ordnance datum” sites. These areas cannot be rewetted according to Barry because “you’d flood half the country – *it just cannot be done* [assertive, ascending tone].”

10.8 CONCLUSION

This thesis has argued that BnM have been declining through time. However this chapter has revealed how they have also been transitioning.

Similar to how value systems associated with bogs have changed through time (see sections 4.8 and 9.7), understandings of the potential of post-industrial bogs have also shifted. Visions of redevelopment through agricultural reclamation and silviculture have proven to be economically unviable. However, efforts by workers to reproduce new forms of nature and amenity in these altered landscapes have proven successful. Yet Lough Boora Discovery Park has not been replicated elsewhere. Efforts are however constrained by costs. Given BnM’s changing priorities to become a profitable enterprise, future amenity efforts will likely be situated alongside commercial activities. An example of this is the Mountlucas wind farm in east Co. Offaly, which allows public access to a cutaway bog landscape which hosts renewable energy. A future example is the Mid-Shannon Wilderness Park (see Chapter Twelve).

The vision for a rewilded cutaway has proven attractive, particularly in the context of the twin environmental emergencies of biodiversity loss and climate change. Policies developed in response to these crises are reshaping the cutaway landscapes in the present day. These themes are discussed in the next chapter.

CHAPTER ELEVEN:

LANDSCAPES IN TRANSITION

11.1 INTRODUCTION

Chapter Ten revealed the historic challenges of developing socio-economic alternatives to peat production. This chapter examines contemporary efforts to reengineer these landscapes for environmental purposes. Carbon storage (if not sequestration) has emerged as a national priority. However, the rehabilitation of bogs does not address the need for long-term employment for those who have lost their jobs as a result of the closure of the peat industry. This chapter further addresses the research question:

What will become of the post-industrial bogs? How have these landscapes been utilised historically?

This chapter reveals two different methods of cutaway bog rehabilitation. The ‘standard’ model is shaped by BnM’s legal obligations under its integrated pollution control (IPC) licence. The second, an ‘enhanced’ approach, is more desirable but constrained by resources. As this chapter shows, remediation works are also shaped by geographic constraints. Elaine (13), an ecologist, remarked that “Every bog is different.” This presents its own challenges as BnM attempts to stabilise its post-production landbank.

Other visions for the cutaway bogs have emerged, notably wilderness, amenity and wind farming. These themes are explored in the next chapter. This chapter begins by examining the origins of peatland rehabilitation.

11.2 THE ORIGINS OF REHABILITATION

In this section, the origins and development of cutaway bog rehabilitation are identified and discussed. From 1999 onwards, BnM has been legally obliged to stabilise its bogs under its IPC licence (Clarke, 2010: 293; see section 4.7.1).

If nature is produced by labour then the same must be true of landscapes. Drawing on the work of David Harvey (1982, 2001 2003), Mitchell (2013: 219) argued that “capitalism constructs a landscape commensurate with its needs at a particular moment and thus any development is *constrained* by that construction” (emphasis in original). To counter the climate, pollution and biodiversity crises wrought by global capitalism, new mitigating landscapes must be produced. In an Irish context, the ‘rehabilitated bog’ has emerged as one such example.

The purposeful rehabilitation of post-industrial bogs began in the 1990s. BnM cutaway bogs in Co. Mayo had started to erode and peat was entering watercourses with causing environmental damage (Clarke, 2010). To ameliorate against this, a new ‘skin of vegetation’ would be needed on the peat surface in order to stabilise it (ibid: 141).

Elaine (13) began her PhD in 1996 with the aim of developing a rehabilitation plan for this landscape. She worked with BnM employees on a number of experimental scenarios, and concluded that the best course of action was to rewet as much of the cutaway as possible by blocking drains and constructing berms so as to create ‘soggy’ areas in which peatland plants might flourish. During her research, Elaine learned what flora was beginning to emerge and what the possibilities for these spaces might be, including if peat-forming habitat might be possible. Following the completion of her doctorate, Elaine said BnM asked her to implement her findings. She recalled how her research was then ‘translated’ across 6,500 ha of cutaway bogland. This was completed by February 2005, just two years after peat production had ended. Nature in the cutaway was produced anew.

Elaine was subsequently employed by BnM to examine the requirements for the rehabilitation of its wider midland cutaway bog landscape. She explained the process behind peatland rehabilitation. Ideally a site would be visited before production ended and mapped. Before decisions are made, it is useful to ascertain the conditions of the extant substrate. It is also important to gauge what is happening in the landscape beyond the bog and how rehabilitation may impact on others. She recalled developing maps of land use and habitats across the BnM landholding using Global Information Systems (GIS). The data helped Elaine decide which bogs could be restored back to functioning raised bogs, which would ultimately be fen-like due to deep peat removal and which would form heathland. This scientific approach would lead to better predictions as to what would happen to the land (see plate 11.1) once production ceased. This coincided with new understandings of peatlands.



Plate 11.1 Rehabilitated cutaway habitats, Boora, Co. Offaly A range of landscapes and ecosystems emerge following the cessation of peat extraction. Scrubland (top left), heath (top right), reed beds (bottom left) and open water (bottom right) have all developed at the now cutaway BnM Boora group of bogs in Co. Offaly.

Elaine explained that in c. 2008 peatlands and their connection to climate change began to be widely acknowledged. In the past they were valued in an environmental sense for their contribution to biodiversity (e.g. Bellamy, 1986; O’Connell, 1987a). When Foss (1987b) asked what the future entailed for Irish bogs, he did not mention ‘carbon’. Whilst rehabilitating cutaway bogs in Co. Mayo during the late 1990s and into the early 2000s, Elaine recalled that there was no discussion about carbon. However, the topic was present in *Wise Use of Mires and Peatlands* (Joosten and Clarke, 2002). Elaine said that if peatlands are to retain their carbon they have to be maintained in a wet condition – by rehabilitating cutaway bogs water was once again returned where it had previously been stored. Thereafter, emissions of carbon are reduced and habitat is recreated. Concluding, Elaine said “You need to rewet where you can.” Her analysis mirrored by environmental professional Jason (10), who said, “Bogs are all about water management (see plate 11.2).”

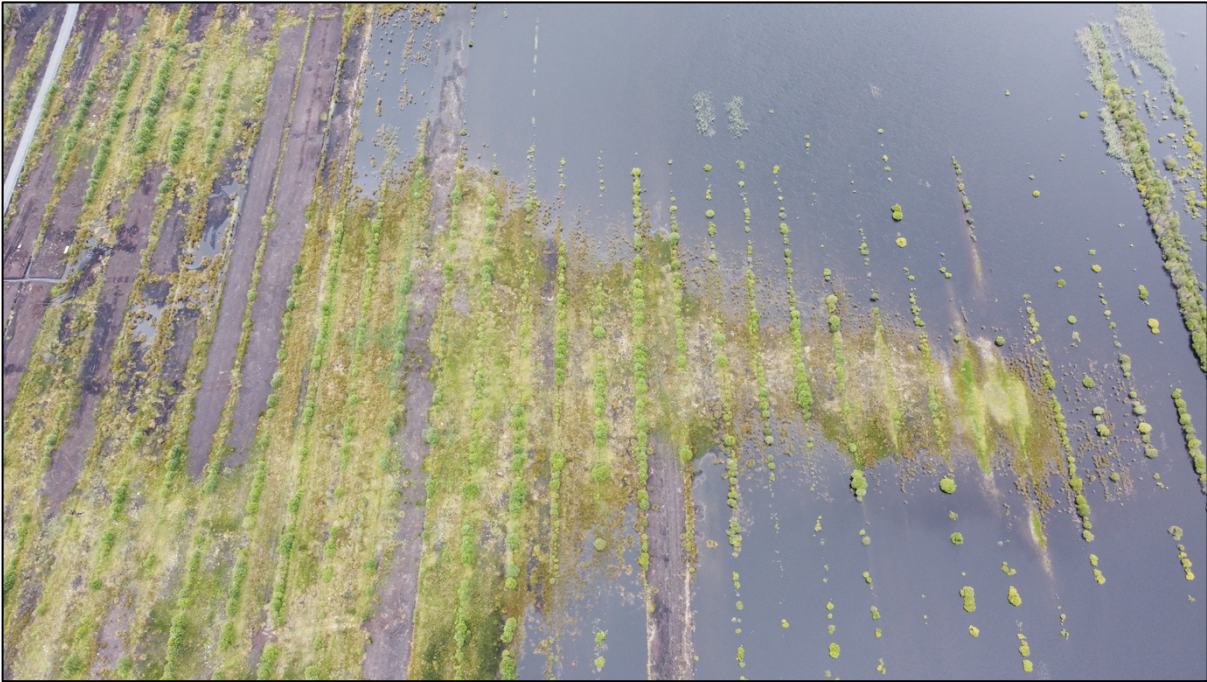


Plate 11.2 Rewetted cutaway bog at Corlea, Co. Longford Topographically, these are heterogenous landscapes. The collection of water at one end illustrates the ‘fall’ of the bog. This creates its own challenges for ecologists.

This section discussed the beginning of purposeful rehabilitation of post-industrial bogs. Efforts to limit environmental harm arising from abandoned cutaway eroding into waterways in the late 1990s coincided with the rollout of the IPC licencing system. Environmental consciousness continued to develop and soon the bogs began their association with carbon emissions. This would reshape value systems and policy in the years thereafter.

11.3 THE FUTURE OF THE CUTAWAY

In this section, the future of the cutaway bog landscape is considered. It reveals the unpredictable nature of these ruderal ecologies. Each bog has unique characteristics which will influence its after-use.

I asked ecologist George (32) what he believed would happen the cutaway bogs in the future. He responded, “That is a million dollar question.” I asked Gillian (18), a soil scientist, the same question. She responded, “Who knows?... I’ve no idea what is likely to happen.” Their ambiguous answers illustrate the uncertain future of these eroded landscapes. In figure 11.1 a number of outcomes identified in this research are outlined.

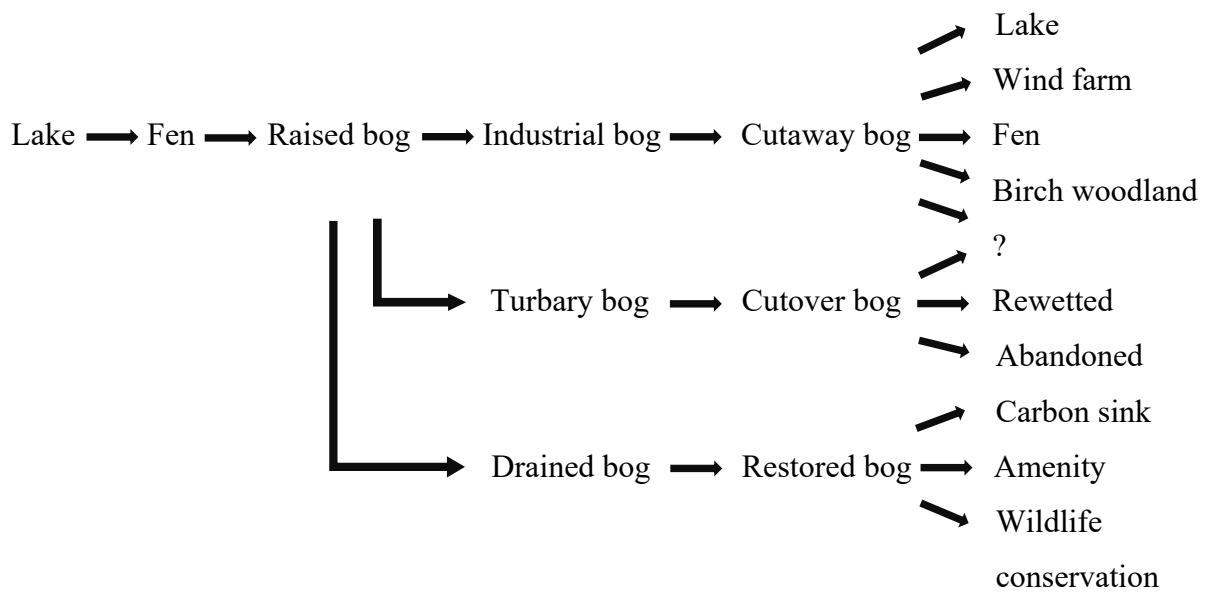
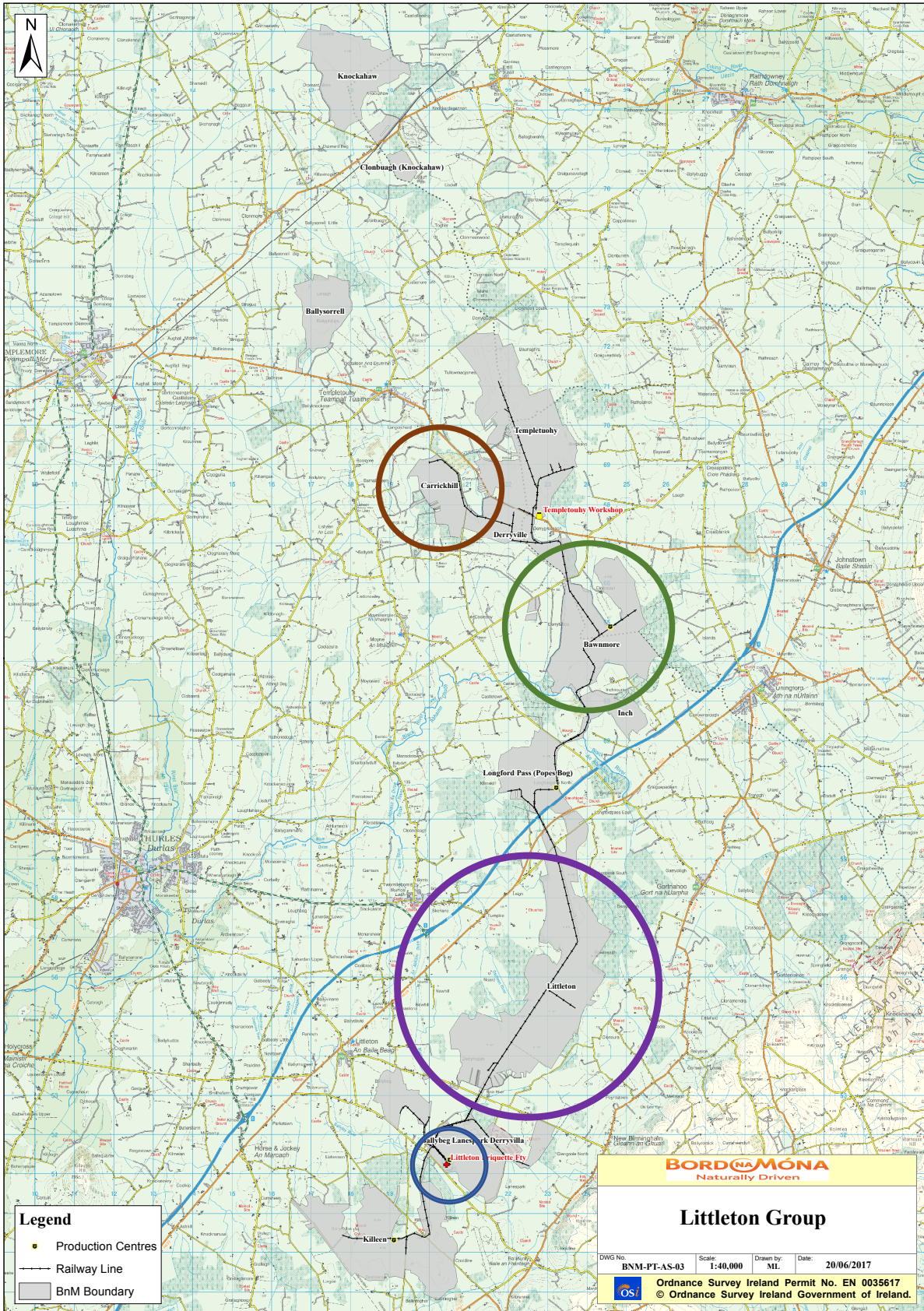


Figure 11.1 Social nature lifecycles of Irish peatlands

BnM ecologist Frank (6) confirmed (pers. comms. 16/08/2021) that the company does not have plans for all of its bog groups yet. However, the company is obligated to stabilise its bogs under its Integrated Pollution Control licence, issued to it from the EPA. From this emerged its bogland rehabilitation programme. In 2018, BnM closed its Littleton briquette factory. Its corresponding bog group was subsequently rehabilitated. In the next section, this process is examined in order to gain an understanding of the future of these landscapes.

11.3.1 Rehabilitating Littleton

I met Frank, a BnM ecologist, in August 2019 at the Littleton group of bogs. Straddling the Co. Tipperary/Co. Kilkenny border, this 5,000 ha complex is the company’s most southerly group. Both machine turf and milled peat were produced from these peatlands. Milled peat was sold into the Littleton briquette factory, which closed in 2018. With the bogs thereafter no longer required, BnM was obliged to decommission them under its IPC licence. We visited two of the bogs: Carrickhill and Bawnmore (see map 11.1). This initial site visit was conducted during the second year of the three year rehabilitation process. As the findings from this fieldtrip demonstrate, and adding to the evidence presented in Chapter Ten, a one-size-fits-all approach to post-industrial bogland management is not feasible. The future of each cutaway bog will be determined by its range of unique characteristics. This has implications for those who are stakeholders of these landscapes. The first bog surveyed was Carrickhill. The findings are outlined next.



Map 11.1 BnM’s Littleton group of bogs The Littleton briquette factory (circled in blue) was supplied with milled peat from the surrounding bogs. Bawnmore bog (green) and Carrickhill (brown) were surveyed during the present study. A wind farm is planned for the main Littleton bog (purple). Supplied by Bord na Móna.

Survey #1

The first cutaway bog surveyed is called Carrickhill. This was conducted in August 2019. Frank (6) estimated that production began on the bog in the 1970s. This ended in 2017. The site is about 250 ha in size. During our visit, Frank described the bog and identified its defining physical characteristics. These determine after-use options and are outlined here.

To facilitate peat extraction at bog, a mechanical pumping system was used to remove water (plate 11.3). Alternatively, a ‘gravity overflow’, in effect a ditch cut into the ground, could take water away. Frank noted that there is little elevation change between Carrickhill bog and the nearby river so this pump was required. It was turned off at the time of our visit so as to facilitate the rewetting of the site.



Plate 11.3 Bog pump at Carrickhill bog, Littleton, Co. Tipperary. It was used to drain water from the bog when it was in production.

Frank said that the topography of a given bog is an important consideration when planning rehabilitation. He described the ‘general topography’ of Carrickhill bog: “The southern end is higher ground, and so generally the fall of the bog is towards the northern end, which is lower ground. So that’s the fall of the bog.” He also described the ‘local topography’: “The high field was used to stockpile the peat, and the low fields were used to harvest the peat.” Frank explained it was not feasible to rewet the higher sections of the cutaway (see plate 11.4). To do

so would mean raising the water level in the lower sections, which may not be possible, nor desirable. Instead, Frank indicated to small depressions that he had arranged to be made with a bulldozer on top of the high fields. These he hoped would fill in with water in time. I asked if the bog should be flattened to eliminate the topographic variations. Frank stated that this would require a significant amount of bulldozer hours. He concluded the benefits this would bring would not be worthwhile:

This is an issue for lots of different people, the fact that our surface is quite variable. And so lots of people would be saying ‘Oh, that’s not good enough, you have to level the bog.’ But this is just an effect of industrial peat production. This is what you’re left with, and that my view would be, in terms of cost benefit... You’re not going to get the benefit of a very engineered approach, levelling the bog here.



Plate 11.4 High and low fields Examples of high field and low field elevation features in post-production bog, Bawnmore bog. Topographic variations pose challenges and opportunities for ecologists rewetting the cutaway.

High field

Low field

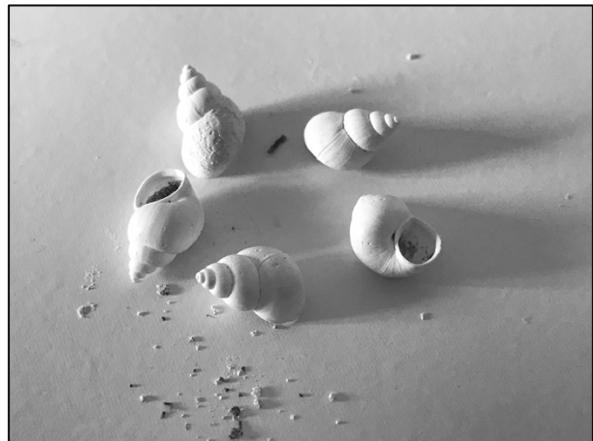
It became apparent that BnM were adopting a light-touch approach to rehabilitation. Frank said that the BnM ecology team encourages the natural recolonisation of its cutaway. In effect, they are working *with* nature. He said, “We can manipulate the environment so that we can speed it up.... One of the ways we do that is by rewetting.” Furthermore, he said his philosophy or strategy did not attempt to try and make “water flow uphill”, nor were his team concerned about where particular plants decided to grow. Simple efforts like drain-blocking were central to efforts. Moreover, the variable topography of the site would result in a “mosaic of wetland

habitats” according to Frank. Further out into the bog birch scrub and heather would develop, alongside poor fen wetlands.

Blocking the drains on the bog which previously facilitated the removal water enables rewetting. Frank described this: “We want to basically defeat the drains, so the drains aren’t functional, and raise the water levels so it has to flow across the surface.” Frank illustrated this furthered into the bog when we encountered a large pond: “So this is the result of all that drain blocking. This is what we are looking for. We look for a patchwork quilt of these small, little wetlands or dashes of water. We’re looking for shallow surface water over the peat to increase, to speed up the natural revegetation.” While efforts to rehabilitate this bog had only been in place for a short period of time upon our visit the benefits were already evident. Dragonflies were abundant around the blocked drains. Frank remarked: “As soon as you get a splash of water you get lovely invertebrates.” He later explained that this cutaway bog is also home to the Marsh Fritillary butterfly (*Euphydryas aurinia*), the only legally protected insect in Ireland.



Plate 11.5 Materials underlying raised bog
Lacustrine deposits (left) at Carrickhill, BnM Littleton bog group, Co. Tipperary. Snail shells (below) can be found in the substrate that was once lake bed. In time, these waterbodies became fens and eventually raised bogs.



Lacustrine deposits (plate 11.5) are present throughout the cutaway bog. Frank explained that this formed at the bottom of the shallow lakes that developed in the area following the end of last Ice Age 10,000 years ago. It is partly made up of tiny shells from aquatic snails that once lived in the water. In contrast to the acid nature of the raised bogs that eventually emerged, the cutaway bog at Carrickhill is now more alkaline due to the presence of this calcium-rich marl.

Frank elaborated on the significance of this: “That influences what plants [will] come back here. You have common bog cotton (*Eriophorum angustifolium*), and you have some [bottle sedge] *carex rostrata*... Those are very typical poor-fen species and all of those species are indicative of this sort of environment.”

It may be some time before these landscapes transition however. Frank reflected on this: “When does a cutaway bog become a fen? We still haven’t answered that question. Some of our oldest cutaways – there are areas in [them] that are very fen-like and have all the species of fens, so are they functioning fens yet? Possibly not. And they’re relatively small. So it might take some time before we start calling these areas fens.” In time the poor-fens which do develop may become rich-fens. Frank said, “depending on the hydrology... getting [the] hydrology right – you could see rich-fen developing here, because of the influence of shell marl.”

The another noteworthy geographic feature of Carrickhill bog lies in its centre: a mineral island. Frank described it as being made up of the deposits of an Ice Age glacier. It had been engulfed by peat, but this had been removed at least twenty years prior to our visit. Frank remarked that its geochemical influence would affect its botanical diversity, and in turn, enhance biodiversity more generally at the site.

There are wind turbines in the landscape surrounding Carrickhill bog. Some are from the BnM Bruckana wind farm and other are based in the former Lisheen zinc mine. The installation and operation of wind farms in rural Ireland is contentious in both social (Brennan and van Rensberg, 2020) and environmental (Renou-Wilson and Farrell, 2009) contexts. Turf-cutter Cathal (35) said he does not like wind farms. He remarked: “[It] is a thorny subject, ‘cause no matter where you put them, they’re unsightly.” Moreover, he argued that a bog, whether intact or cutaway, was no place for a wind farm due to the potential risk to wildlife from being struck by the rotating blades. Research by Fernánadez-Bellon et al. (2018) found lower bird densities around wind farms, particularly close to turbines. I asked Frank if wind energy is compatible with his rewetting efforts at Carrickhill and whether turbines may in time be located in the bog given its close proximity to the other wind farms. He responded: “Yes, it’s largely compatible. But again, there’s always going to be issues.” He elaborated: “There’s always going to be wins and losses. If you bring infrastructure through here – engineers don’t like their infrastructure getting wet.” Frank continued: “So obviously as part of the infrastructure there will be drains. But what we found in terms of Bruckana and Mountlucas is that the wind farm infrastructure

takes up about 4-5% of the overall land footprint. So, like, if I take you out to Mounthucas or Bruckana, you can see between the turbines, there's plenty of, I suppose, wild landscape areas. There's plenty of pioneer habitats developing." I asked Frank about rewetting the cutaway bogs with wind turbines in situ. He responded: "Yeah, so those areas between the wind turbines, they would be rewetted where we can rewet them. Obviously then beside the roads, there would still have to be drains. Around the turbines, there still have to be drains." Frank then addressed the impact on wildlife if a wind farm was developed:

There's a lot of biodiversity on our wind farms in terms of plants, animals and birds – certain bird species. But turbines do... have an impact on certain bird species.... You have to consider all those potential impacts in terms of planning a wind farm... in terms of the potential issues. If we create a big wetland here, you could attract in wetland birds – potentially that's not going to be a good fit, or a good mix with turbines, particularly species like swans.

Frank explained that all of the factors surrounding renewable energy development are considered during its Environmental Impact Assessment. He added: "So you avoid, or reduce those impacts. BnM is going to be in a position where it's going to be very hard to avoid all impacts. So it's very much about trying to minimise the environmental impacts." Frank said a wind farm was unlikely for Carrickhill: "I think this is a relatively small bog. You potentially [could] put a row of turbines up the middle... How many turbines would you get? Two or three? In terms of cost/benefit... of building a wind farm, that's not great." Frank nevertheless said there was a possibility of developing a larger wind farm incorporating Carrickhill with other BnM bogs nearby. This he contended might create a more commercially viable proposition. At no point in the discussion was the later announced Littleton Wind Farm mentioned.

I asked Frank about the end goal for Carrickhill cutaway bog. He responded:

We take a short-term view. You look out here, it's pretty much brown landscape dominated by bare peat. I want to see vegetation on this landscape... in the short term. I want to see it vegetated. I want to see natural, or semi-natural habitats developing on this landscape. Once we get that, we can promote those habitats and increase greenhouse gas sinks, and we can potentially reduce the greenhouse gas fluxes. So again, it's working with the environment and trying to put this site on the right trajectory.

The site visit to Carrickhill revealed a number of important factors when considering the future of the cutaway. Physical features such as the landscape's topography, chemical composition and elevation all play a role in influencing its recovery. Socio-economic requirements are also important factors. If a bog is considered suitable, renewable energy projects may be developed. However, as Frank's contribution suggests, there are trade-offs when situating wind turbines in bogs.

Survey #2

The second cutaway bog surveyed was Bawnmore. This was conducted in August 2019. At 600ha, this bog is more than twice the size of Carrickhill. Production ended there in 2017. However, parts have been out of production for some years prior. An area of naturally revegetated cutaway bog (plate 11.6) occurs at its entrance. Frank remarked that this area had been out of production for between ten and twenty years. Drainage he said had naturally broken down. Frank expects birch woodland to develop here in time.



Plate 11.6 Naturally regenerating cutaway at Bawnmore bog Birch and willow scrub are present. In the background, to the right, a stockpile of 'bog oak' is just visible.

Further in, Frank identified a ‘perfect example’ of cutaway bog, containing “very shallow water with emergent vegetation.” One of the plant species present is bottle sedge (*Carex rostrata*). Frank remarked: “All of that has its feet wet. It’s living in the water. If we can achieve water depths like that on the cutaway, we know we can develop this sort of habitat. And I think that this is the best habitat in terms of putting this site on the right trajectory towards reducing carbon emissions into the future.” This optimal example of cutaway bog and others that develop like it can enhance biodiversity. Frank added that it is the “best site in the Littleton bog group for wetland birds.” He said that between 150 and 200 whooper swans (*Cygnus cygnus*) had utilised the area in the previous winter. I asked him if bitterns (*Botaurus stellaris*), now extirpated in Ireland, might be reintroduced to places like this. Frank answered: “everything is possible,” but cautioned that, “you’d want to bring bittern into habitat that they actually like.” He said the birds require large reed bed ecosystems. These may not emerge in cutaway. He explained, “with Bord na Móna bogs... we are going to see a *mosaic* [emphasis] of wetland habitats. So we’re going to see a little bit of this, and a little bit of that. And that doesn’t suit some species.”

Nevertheless cutaway bogs like Bawnmore will provide valuable habitat to other threatened species. Frank said that lapwings and black headed gulls (*Larus ridibundus*) breed in the area in April and May. Ringed plover (*Charadrius hiaticula*) also breed in the bog, which he said is an unusual occurrence in this part of Ireland. Frank described their presence as a good indicator as to the potential of the site for biodiversity in the future. However, the cutaway bogs as they are will change – they are not static ecosystems. And this will have implications for wildlife according to Frank: “Breeding lapwing and other ground-nesting waders, they like the big open landscape as it is now... So that’s why they are using this land. But in ten, twenty, thirty, forty years’ time it’s going to scrub up, it’s going to become fragmented to them... We’re going to see a tailing off in terms of ground-nesting birds.” In short, a range of specialist bird species may repopulate these landscapes, but their presence is not guaranteed into the future as natural ecosystem succession develops.

We walked down along a shallow stream of water as we travelled deeper into the cutaway. Frank said that one of BnM’s aims when ‘manipulating’ cutaway bogs’ hydrology was to “lengthen the pathway.” This contributes to BnM’s key objectives, which he described as stabilising the cutaways in order to minimise pollution, specifically silt entering into the water and dust entering into the air (i.e. IPC requirements, see 4.7.1). Further to this, Frank described

the drains in the bog as now acting as silt traps, meaning “the water quality should be vastly improved now when it’s leaving our site.” He added: “I get fussy about water levels – you would have seen that today in terms of trying to figure out what the best water level is. Sometimes it’s easy to create a lake, but that may not be the best outcome for rehabilitation, and we know that now.” Frank is guided by research which finds that optimum peatland conditions see water at or just below the surface (see Mackin et al., 2017 for a discussion on optimal peatland water table management). Rather than an emphasis on amenity and biodiversity like at Lough Boora Discovery Park, Frank explained the emphasis has shifted to carbon sequestration:

In the past, we would have maybe created large water bodies, and that can be particularly good for birds... but now, I suppose we’re more focused on trying to manage water levels to develop habitats that are going to be the best outcomes for climate change mitigation, and so that’s putting our wetland habitats on the right trajectory to develop, or go towards peat-forming habitats into the future... I want an area with wet peat, [where] you need your wellie boots to walk through [it], but you know it’s not going to fill your wellie boots.

Bawnmore bog contains areas of optimum cutaway. BnM’s IPC licence requirements are met as the bog’s hydrology has been shaped in such a way that water leaving the site is clean. Soggy, revegetated areas mitigate against the release of carbon and provide habitat for threatened bird species. However, the site is likely to scrub up in time and this valuable habitat will be lost. A year later, I returned to the site to see how it had progressed.

Survey #3

In July 2020 I revisited Bawnmore bog with George (32), another BnM ecologist to survey the landscape again. In this section, progress is outlined along with observations that suggest that further work might be needed.



Plate 11.7 Revegetated cutaway, Bawnmore bog The timber in the background is stored biomass.

Bawnmore bog was in its final year of rehabilitation when I visited it again. George provided an update on its progress: “It’s a site where we’ve completed the rehabilitation work. So we’re happy enough that the bog now meets the requirements of the IPC licence for stabilisation of... potential environmental pollutants, at least to the best of the ability we can deliver it.” Whilst the rehabilitation to satisfy the IPC licence was complete, BnM are required to continue monitoring water quality, specifically ammonia and “solid matter”, as George described it, leaving the cutaways. He added that: “Some parts of the bog have really nicely rewetted and started to revegetate.” An example can be seen at plate 11.7.



Plate 11.8 Bare headland at Bawnmore bog The lack of vegetation is in contrast to that depicted in plate 11.7.

I asked George if it was, in his opinion, possible to rewet all the bogs. He answered, “No.” Elaborating, he said: “In some [cutaway bogs] where you milled away all the peat and you’re down to the glacial till it’s very free-draining, so you’ll never get water [to remain on] it.” Echoing what Barry (22) said about rewetting around Lough Boora, George said that higher, drier areas were unlikely to be rewetted in a “realistic timeframe.” Significant areas of bare peat were visible in the Bawnmore landscape (e.g. plate 11.8). These are in contrast to optimum conditions viewed previously. George explained why this was the case.

George described the BnM ecology team’s rehabilitation efforts to date with reference to a ‘bay’ that had been rewetted. Bays were areas where peat extraction took place. Each bay contains between five and nine 50-foot wide ‘low fields’, which are long tracts of land from which peat was milled. I asked George if the rewetted low field we were surveying would store carbon. He said, “No. It won’t keep carbon in the ground until it begins to develop a really good vegetated surface.” He added that rewetting efforts hasten the time it takes to for this

landbank to become a carbon sink once more. However, George conceded that methane would be emitted from the rewetted bog.

The high fields are long, elevated peat banks on the perimeter of bays. George said they were either stockpiles of peat or areas used by peat trains. The high fields are challenging to rewet as Frank noted in his contribution, but George saw them differently, arguing they were useful for stopping water moving laterally across the cutaway bog. To stop the water moving too far along the bays, berms (dams) are constructed across them. This creates discrete ‘wetlands’ within the bays, effectively compartmentalising the site. There are other features in the landscape. George described ‘headlands’, the areas outside of the bays and high fields which surround the entire bog. Like the high fields they too are dry. It’s unlikely that these will be rewetted and instead George and his colleagues will use fertiliser to encourage their revegetation. This will stabilise them and ensure that the conditions of the IPC licence are met.



Plate 11.9 Rewetted cutaway A rewetted bay between two high fields. The berm halts the flow through the bay.

I asked George if the high fields could be rewetted. He responded, “Possibly – we’re trying. Not successfully yet but we have a couple of methods we are experimenting with.” I asked him to describe these. He said the high fields had camber on them that leads to water run-off. By running a bulldozer the length of them it is possible to push the surface peat to the edges, thus creating a canal-like indentation. George added water can be blocked along this canal with a series of berms, therefore creating a ‘cells’. However, he described this as “an awful lot of work, and it might be for very little gain.” Instead, he and his colleagues usually fertilise the high fields to encourage revegetation, therefore stabilising the surface, and ensuring that peat will not move into the air or surrounding water. In this approach carbon emissions are simply mitigated rather than sequestered.

We discussed the future vision for the cutaway bogs. George reiterated the direction of use outlined by his colleague Frank the year previous: “At the moment there’s a big focus on using them as carbon sinks – carbon storage, and the best way of doing that is to rewet them, so they can continue to be carbon sinks.” George indicated that this approach would complement other uses:

There will also be multiple other uses – renewable energy generation for example... There’s wind here, but there could be solar farms in some of these sites. There’ll obviously be amenity use in some of these sites... There’s Boora – that would be a good example of that. There’s talks about walkways and greenways on a lot of the Bord na Móna sites.... There’s nature conservation as well.... Forestry is another possibility for... after-use of the cutaways.



Plate 11.10 Features at Bawnmore Abandoned industrial railways routes (left) in Bawnmore bog could be repurposed to facilitate amenity access. Moreover, non-commercial forestry remains an option (right).

It is surprising to hear forestry (see plate 11.10) considered for cutaway given the challenges of the past (see section 10.3). George explained: “The afforestation here is for biodiversity. So it’s a Coillte project... They’re required to have a certain area of their estate for biodiversity. So in order that they can maximise their productive marketable timber, they’re looking for areas where they can put biodiversity forestry in place to off-set the other parts of their estate.” George explained that some of the forestry trials underway at Bawnmore were designed to establish trees on the problematic high fields. He remarked that trees would naturally recolonise these areas in about 25 years, but with data from trials like that underway at Bawnmore, the process could be sped up. George added: “It’s all about reducing carbon emissions. You’re not creating a carbon sink by putting in woodland, but you are reducing the amount of carbon that is being emitted.” Wilson et al. (2009) agreed that afforestation of cutaway bogs may be desirable from a climate change mitigation perspective.

The forestry trials at Bawnmore are basic in their scope; it is a relatively simple exercise to see what will grow. In one example, willow cuttings were inserted into the peat to see if they would establish. Other species in the trial include birch. Some saplings were protected with tree guards, while others were not. This will help determine if there are problems with hares eating the saplings. This trial may be extended in the future, with the possibility that flux towers could be installed to monitor greenhouse gas emissions. Yet simplistic trials like this have been looked at unfavourably. Bog conservation campaigner Anne (11) was critical of BnM’s seemingly ad hoc implementation of its standard rehabilitation scheme under its IPC obligations: “[Bord na Móna is] a company that wants to do the bare minimum unfortunately... So we’re at loggerheads with them all the time because... they move out of an area, a guy goes in on a bulldozer, blocks up a few drains, and it’s like, ‘Well, let’s see what happens’.” Anne said BnM’s approach is: “...not very scientific – the way they do the management. And they’re very *lucky* [emphasis] if 20% of an area is rewetted. And the rewetting is absolutely essential to stop the carbon leakage.” Anne continued: “And then what we’re doing is we’re letting everything just naturally recolonise with this, that and the other. So if you walk across any area that has been rehabilitated, for example, Lough Boora [Discovery Park] – it’s probably the best developed – *there’s still vast areas of just* [mild indignant tone] bare peat.” Anne concluded that this is “completely unacceptable” and asked, “Why won’t they just spend a week with a bulldozer, flattening stuff a bit more, so that more of the land can actually be rewetted?” I put Frank’s concerns to Anne that this would use large amounts of fossil fuel and would be expensive. Anne responded: “I think that’s absolutely baloney. I think they have taken a *literal*

[firm emphasis] interpretation of what's expected under their licence, and they *literally* [emphasis] intend to do the bare minimum." NPWS ecologist Graham (9) had an explanation for this. Discussing the cutaway bogs and the implementation of the IPC obligations, he said that, acknowledging this should not be applied to all sites, "more could be done to make them wetter." The factor limiting he said was a "*resources* [emphasis] issue for Bord na Móna."

This section described three site visits to two cutaway bogs undergoing rehabilitation in the BnM Littleton group. Carrickhill and Bawnmore were both surveyed in August 2019. I returned to Bawnmore the following summer. These field trips provided data concerning the rehabilitation process. Optimum cutaway bog was identified as being soggy, revegetated, with the water table at or below the surface. In this condition, cutaway bog would meet the terms of the IPC licence BnM operated under. Moreover, it would be placed on a trajectory towards carbon sequestration while providing habitat for threatened species. However, significant areas of bare peat were observed. These are difficult to rewet and are subject to fertiliser application. Lack of resources may be a factor in why these landscapes were not fully rewetted. However, this would be rectified following investment into the process by the European Union, the Irish state and BnM themselves. The 'enhanced' rehabilitation of Irish post-industrial bogs is examined in the next section.

10.4 ENHANCED REHABILITATION OF POST-INDUSTRIAL BOGS

In this next section, the enhanced rehabilitation of BnM bogs is examined. This process would build upon previous efforts as resource constraints were alleviated.

In June 2020, Frank informed me that BnM would be pursuing 'enhanced rehabilitation' (pers. comm. 17/06/2020). This he said would be 'more intensive' and would "potentially look to re-profile [cutaway bog] in certain places." Shortly after, it was reported that the government was making €15 million available for enhanced cutaway bog rehabilitation (Carey, 2020). Further funding would be made available following the December 2020 announcement of the 'Bord na Móna Bog Rehabilitation Scheme' by the Department of the Environment, Climate and Communications (2020). This would contribute towards Ireland's goal to be carbon neutral by 2050. The scheme would protect 100 million tonnes of carbon, enhance biodiversity and create 310 jobs. This would evolve into BnM's 'Peatlands Climate Action Scheme' (PCAS). This enhanced peatland rehabilitation programme would safeguard a net extra 3.2 million tonnes of

CO₂ compared to the standard rehabilitation approach the company was obligated to employ as part of its IPC licence (Department of the Environment, Climate and Communications, 2020). At €126 million, the enhanced rehabilitation scheme is expensive. It is made up of €108 million provided by government and the European Union, and an investment of €18 million by Bord na Móna (O’Sullivan, 2022).

However, there are concerns about such a scheme. I asked Frank (pers. comms. 8/9/2021) if the combined €126 million would be enough money to complete the enhanced rehabilitation of the 33,000 ha of bogs earmarked. Frank responded that they could never have too much money for the task at hand. Nevertheless, he was measured in his response, noting that some people might consider the sum too much following a cost/benefit analysis. Turf-contractor and public representative Brendan (30) is one such individual. He expressed scepticism about the rewetting of BnM cutaway bogs given the high costs associated with such an exercise. He argued that a lot of bogs were “down near the bottom.” He asked in a bewildered tone, “What are you rewetting?” However, the claim that 310 jobs would emerge from the scheme is welcome in the context of just transition efforts. I asked George if BnM would need to hire more workers to perform the enhanced rehabilitation. He believed that the existing workforce would be able to do it. Some limited future work would be available such as drain block repairs. This could mean longer term jobs for those working on rehabilitating cutaway bog. However, this will not replace the production jobs that once existed.

The environmental implications of enhanced rehabilitation are clear. PCAS enables BnM to go beyond the requirements of its IPC licence, which George conceded were “quite basic.” He said the enhanced rehabilitation enabled by the scheme involves “rewetting the bits you might not have rewetted in the past”, for example, “rewetting further up slopes.” This speeds up the development of peat-forming habitats that actively sequester carbon. I asked George what had prevented BnM from performing enhanced rehabilitation previously. He responded that it was down to money. He added that BnM had an obligation to return a profit to the state. It was therefore not economically feasible to perform such actions. The challenges faced by the ecology team were illustrated in a public presentation given by McCorry (2021) in September 2021. He claimed that in 2015, BnM’s ecology team had access to just one excavator to conduct rehabilitation works. This could build just 25 peat dams per day. By 2018, the team had access to three diggers. As part of the enhanced works scheme, the team has access to approximately 100 machines.

I asked McCorry two questions after his talk. The first concerned BnM's future use of its landbank. I noted that 33,000 ha out of 80,000 ha is entering into enhanced rehabilitation. I inquired what would happen the remainder. McCorry said that BnM had already rehabilitated 20,000 ha of its landbank. Some of this may also be subjected to enhanced rehabilitation. He remarked that 4,500 ha was afforested. McCorry gave no precise details as to the number of wind farms which may be developed on its lands. He confirmed that farming was excluded as an after-use option for climate change reasons. Moreover, a herb-growing project was discontinued as it was deemed not to be commercially-viable. He concluded: "At the moment, we are very much focused on renewable energy." In the second question I asked if headlands and high fields would be rewetted under PCAS. McCorry responded that 'in general' they would not develop wet habitats due to their elevated nature. He said that they would likely develop into birch woodland or heath.

This section discussed the enhanced rehabilitation of BnM cutaway. The Irish state, the European Union and BnM have collectively invested €126 million into the remediation of these post-industrial bogs. This is a considerable sum. However, it is unlikely that all sections of the cutaway bog landscape can be rewetted. Moreover, it is unlikely that long-term employment will result. Yet this investment will likely ensure that a significant proportion of the cutaway landscape is repurposed for the benefit of its stakeholders. What will become of the cutaway in time is yet to be determined.

10.5 THE DRAWBACKS OF REWETTING

In this next section, a number of concerns associated with rewetting bogs are identified and examined. In the previous section, the ecological value of rewetting cutaway bogs was discussed. However, it can have drawbacks beyond the cost. There are also other debates emerging concerned with protecting farmland and methane emissions.

There is broad agreement amongst peatland scientists that bogs should be wet in order to minimise emissions of carbon. However, this presents its own economic, social and environmental challenges. Since the Arterial Drainage Act of 1945, considerable effort has been made in Ireland to facilitate the prompt removal of water from land in order to enable the movement of machinery across its surface and to grow crops which cannot thrive in waterlogged conditions (Wilson, 2021). 'Improvement' of otherwise wet land enhances its

agricultural productivity, but degrades its carbon storage capability. Efforts are ongoing across the state to rewet peatlands, including at BnM, Coillte (2015) and The Living Bog restoration project. However, there are concerns that farmland surrounding rewetted bogs could be inundated with water. Wilson (2021) advised that he had not seen this in his 20-years of experience working alongside BnM's ecology team. Nevertheless, Wilson was advised in personal communication that flooding may be a risk in lands surrounding the River Shannon. Conversely, efforts to protect farmland from flooding could impact on the ecological integrity of restored bogs. Efforts are underway to reconcile differences between farmers and bogland ecologists. The FarmPEAT project aims to cooperate with farmers working land around bogs. This trial scheme rewards farmers through a results-based system for improving the environmental value of agricultural land adjacent to a number of important peatland sites (FarmPEAT, N. D.).

Environmental concerns associated with the rewetting of degraded bogs have also emerged. Rewetting helps degraded peatland store and/or slow the release of carbon dioxide into the atmosphere by recreating natural anaerobic conditions. This has its drawbacks. Rewetting also causes the release of methane, a more potent greenhouse gas than carbon dioxide in the short term. Günther et al. (2020) acknowledge that peatland managers must decide between emissions of weak, but persistent carbon dioxide (CO₂), or strong, but short-lived methane (CH₄). However, following their investigation of the relative impact of rewetting based on the balance of these greenhouse gases, they conclude that CH₄ emissions do not impact on the climate mitigation potential of peatlands, and that postponing the rewetting process contributed to increased climate change contribution overall. Furthermore, CH₄ emissions can be mitigated by careful water table management. Wilson et al. (2009) found that the creation of lakes in cutaway bog landscapes contributed to CH₄ release. It is now broadly accepted that rehabilitated and restored bogs should be 'soggy', with water levels at or just below the surface. However, peatland water tables are not static, but subject to considerable variability (Renou-Wilson et al., 2022). This poses challenges for those seeking to manage these landscapes. In conclusion, the greenhouse gas limiting potential of peatlands is a long, rather than short term solution to climate change (Martens et al., 2021).

10.6 CONCLUSION

This chapter examined BnM's rehabilitation of its cutaway bogs. It has adopted two approaches. The first, standard rehabilitation, covered 20,000 ha of the company's 80,000 ha landholding to date. This saw post-industrial bogs stabilised, usually through drain-blocking and revegetation, in an effort to prevent the escape of peat into the air and waterways once extractive activities ceased. However, this is a basic approach. The second is enhanced rehabilitation. BnM was unable to pursue more sophisticated remediation efforts due to lack of resources. Following investment of €108 million by the Irish government and the European Union, BnM has been able to commence work to reprofile 33,000 ha of cutaway bog in order to mitigate carbon emissions as part of the Ireland's goal to become carbon neutral by 2050. The company invested €18 million, which is a modest sum in the context of its recent efforts to raise investments worth €1.5 billion for renewable energy (Phelan, 2019).

While BnM is legally obliged to rehabilitate its bogs to the 'standard' level, a decision was made to take this further. An investment of €126 million has been made to produce cutaway bogs as carbon stores. What will become of these landscapes thereafter is unknown. In the next chapter, initiatives to reimagine the post-industrial Irish bog landscape are explored.

CHAPTER TWELVE:

TOWARDS A JUST TRANSITION

12.1 INTRODUCTION

This chapter considers the contemporary transition of communities, workers and the cutaway bogs themselves following the closure of the peat industry. Spatial justice and specifically the concept of just transition, emerged from Chapter Two's review of social nature literature. This is applied as a lens in this chapter.

The chapter begins by examining the actions taken by communities in response to the closure of the Irish peat sector. It identifies the Lullymore Heritage and Discovery Park as an early example of efforts to ameliorate job loss. This was established following the closures in 1993 of the ESB Allenwood turf-fired power station and the Lullymore briquette factory. Contemporary community approaches follow on.

The 'just transition' of workers is considered in an assessment of the Littleton briquette factory's ongoing conversion into a recycling plant. Efforts at the ESB to reaccommodate its workers following the shutdown of its peat-fired power stations are then considered. Finally, the production of wilderness as an after-use for post-industrial bogs is assessed. Two models are examined: Wild Nephin in Co. Mayo and the Mid-Shannon Wilderness Park in Co. Longford.

12.2 COMMUNITIES IN TRANSITION

Communities have responded to plant and bog closure in the past as well as in the present. In this section, three examples of community-led transition efforts are identified, the first of which is Lullymore Heritage and Discovery Park (LHDP) in Co. Kildare.

12.2.1 Lullymore Heritage and Discovery Park

The Lullymore Heritage and Discovery Park (LHDP) is a tourist attraction and amenity located on a mineral island on the eastern edge of the greater Bog of Allen landscape (see maps 12.1

and 12.2). Liam (12) is the manager. He described the business as a “social enterprise, [where] all traded income is reinvested into the running of the park, new development and employment.” Liam explained that it opened in response to the decline of the local peat industry: “It was Sean Judge... that basically started the whole thing because he saw the unemployment from Bord na Móna and the ESB, the closures, he saw that there had to be a different way. He saw tourism as a way to keep the community alive, keep the heritage, but also [deep breath] *keep jobs* [emphasis] in the area.”

The peat industry steeply declined in Kildare in the late-1980s. From 1988, production of machine turf was curtailed in the Ballydermot bogs (Clarke, 2010). ESB Allenwood power station, the second of two thermal plants which exclusively used machine-cut turf, was decommissioned in 1993 (ESB N.D a). The Lullymore briquette factory was closed by BnM the same year due to an oversupply of briquettes into the market (see section 5.3). Lullymore Heritage and Discovery Park (2021) in its original guise opened the same year.

Liam began working at the park in 1996, Liam described the “disciplined approach” taken by Judge in overseeing the park: “He was a tough taskmaster... everything had to be done... to the very, very best of your ability.” He continued, “There were no excuses, you had to work.” Reflecting on this culture, Liam said: “Without that, we wouldn’t have got to where we are... A lot of this place is [Judge’s] legacy.” Liam assumed increased responsibilities in the late-1990s.

Liam reports monthly to the voluntary local community group called Lullymore Heritage Park Committee. The board directs the park’s operations including staff training and recruitment, and strategic matters including the reinvestment of generated income back into the business. Informal meetings between Liam and board members occur almost daily. He said, “They keep an eye on it. There is a huge trust... We’re all in this together.” Nevertheless, he stated that “They do allow us freedom to make decisions... on a day-to-day basis.”

Liam detailed the park’s business model. It is situated on 59 acres of land, 13 acres of which are rented (nominally) from Sean Judge’s family while the other 46 is in a long-term lease from BnM. He said over 50,000 people visit the park annually. An individual ticket is €9 and a family of four is €32. Liam identified several target markets. The first, and most important he said, are families. The park has walks, a petting farm, plus outdoor and indoor play areas. Seasonal events are run at Christmas, Halloween and Easter. Other markets include corporates. The park has hosted Pfizer, Ericsson and IBM in the past. 10 – 15% of visitors are from overseas. Takings from the café and souvenir sales provide further revenues. Up until the year prior to my visit (August 2019), which saw a 3% reduction in visits, the park had grown its attendance on a year-on-year basis.



Plate 12.1 Environmental education Knowledge transfer is a central component of Lullymore Heritage and Discovery Park’s visitor attraction.

Liam highlighted the educational aspects of the park, which outlines information about extant flora and fauna, local history and the history of the bogs (plate 12.1). Liam is keen to tell a “truthful” story about the area, and not just tell “one side of it.” He stated: “Without the industrialisation [of the bogs], a lot of people that you’d meet here today – they wouldn’t be here... They’d be living in England or somewhere else. They would have had to emigrate. So you tell the whole story.” Liam said, “We’ve got a group from Scotland in [today], and we offer them an insight into the history and culture of the midlands, and the *bogs* [slight emphasis], from formation to how we used the bogs industrially and also ask what the future might be.”

I asked Liam if the park was a profitable enterprise. He responded, “It was definitely profitable enough to help us develop the park... but that was helped from the fact that we didn’t have to pay some of the labour costs.” He claimed it would not be profitable if the park paid all of its workers itself. In effect, the park is reliant on state subsidies to continue as a going concern. Profits that do accrue are reinvested into the park’s continual development. Liam said the park can go through “very rapid development”, whilst at other times its activities are “more about sustaining jobs.”

Liam described the “huge challenges” experienced by the LHDP in the beginning. In its original incarnation, it hosted a monastery exhibition and later one detailing the Great Famine. It was initially funded by money left over from a water infrastructure improvement scheme. Support from the state would prove necessary for its long term survival. FÁS, the state training body, became involved as Liam explained: “They needed to... have places where people could get work skills and training. We were extremely lucky with some of the people that worked here. We had fantastic tradesmen and people that allowed us to develop the park.” Liam added that the Community Employment (CE) scheme “played a huge role in the development of the park because it wasn’t viable in any way at all at that stage.” He explained that unemployed people participating on the scheme would work two and a half days per week while in receipt of a social welfare payment. Recruits were permitted to work part-time elsewhere. “The whole idea,” he said, “is to get people back to work.” At the time of interview, Liam said the park’s CE scheme provided employment to twelve people. This was less than the 25 to 30 ordinarily participating on it in the past. He stressed that the people directly employed by the park, seasonal staff and those on employment schemes were treated equally. Since it began in 1994, Liam estimates that over 500 people have been worked on park’s CE scheme. However, CE has a drawback for the park. It is temporary employment, with contracts lasting between one and three years.

Pobal has an employment scheme which provides longer term working arrangements. It is used at the park. Liam explained its value: “There’s no time limit on it – as long as they’re still funding it, it goes on. We’ve had it since 2006. So, there are people who have been with us for so long and they’re so experienced.” Liam explained how it worked. Participating workers are paid a ‘basic’ wage by the state and this is topped up by the park. A manager and six full-time employees were on this scheme at the time of interview. In the fifteen years it has ran, Liam estimated that “13 or 14” people have been through it – a relatively low turnover.



Plate 12.2 Industrial heritage Lullymore Heritage and Discovery Park does not hide its industrial heritage. These cutaway boglands were produced through mechanised labour on an industrial scale. Now lying abandoned in the landscape, the machines form part of the attraction.

State-sponsored employment schemes reduce the park's wages bill. Liam said, "There's no way we could afford to hire these people." state supports are also necessary to fund the park's expansion. In 1999 an outdoor play area and minigolf were opened, followed by a café in 2007. Between 2010 and 2015 the peatlands exhibition was developed. Industrial heritage is proudly displayed (see plate 12.2). Funding from Leader and Failte Ireland supported the expansion. A few days after a boardwalk across the bog was opened in 2013 (see plate 12.3), Sean Judge passed away.



Plate 12.3 Lullymore Heritage and Discovery Park boardwalk This facilitates amenity access into the rehabilitated cutaway bogs that surround the attraction.

The park's finances remain a concern. Liam said that insurance premiums had doubled in the preceding two years. The wages bill paid directly by the park had increased. In spite of these challenges, Liam said that the business ensured that “everybody [deep breath] always gets paid at the end of the week.”

In this section, the community response in the form of the Lullymore Heritage and Discovery Park, to the closure of ESB Allenwood power station and the Lullymore briquette factory, was identified and discussed. LHDP is a social enterprise which provides much need employment and training in an area impacted by the long decline of the peat industry. Profits are reinvested back into the business. However, the attraction is dependent on state subvention to continue as a going concern. This may have consequences for its long-term viability should state policy on labour change. Nevertheless, LHDP provides for a useful model that other community efforts in the future could build from.

12.2.2 Community aspirations

In this section, the aspirations of community groups are discussed as the peat industry winds down. Contributors expressed concern for the socio-economic decline in their towns and the loss of their industrial heritage (see plate 12.4 as an example). Kilcormac in Co. Offaly is discussed first.

Kilcormac is a small town in the centre of Co. Offaly deeply integrated into the peat industry. It sits to the south of the BnM Boora group of bogs. In 2003 the nearby Ferbane power station

closed and in 2024, the Derrinlough briquette factory will cease production. Efforts by community activists are underway in response to the slow closure of the peat industry.



Plate 12.4 Derelict housing Rows of BnM Nissen huts adjacent to the company’s Boora offices. These structures used to house workers during the early days of the peat industry. Today, they lie abandoned.

The Kilcormac Development Association (KDA) provides a range of services to the local community. It is a hub for community activities, services like Meals on Wheels, and offers supports including Community Employment schemes. The KDA’s economic subcommittee is leading the community response to the closure of the local peat industry. Retired BnM workers Ed (4) and Gary (8) are involved. I asked both men about the long-term goals of the KDA. Ed responded their aim is: “to make sure that... this little village continues to thrive as a community.... Transition from Bord na Móna.... Look at how we keep something sustainable in the town here by way of jobs and people.” Gary added: “We know that we won’t have any big industries here, so what they want to do is to try and have Kilcormac as a nice place to live, where you actually go to the likes of Tullamore and maybe Athlone for work.” He continued:

“We’re also working on the connection with the Lough Boora parklands which is a massive success here just on our doorstep.”

As it lies at the centre point of Co. Offaly, Gary envisages Kilcormac as a hub for tourism in the wider county, and also as a ‘gateway’ to the nearby Lough Boora Discovery Park (LBDP). Ed noted the position of Kilcormac in relation to popular tourist destinations like Birr Castle, Tullamore Dew, the Slieve Bloom Mountains, Clonmacnoise and the River Shannon. Gary hoped that the BnM’s rail network could be utilised to move tourists from Kilcormac around the rehabilitated cutaway bogs of Lough Boora: “You could have a point here where you could get on [the train], head down, travel all over the bog, hear the whole story – how it developed. How it came about, how people got their living from them and all that. Return back here, go in and have a pint or a bite to eat, or maybe an overnight [stay]... That’s how the economy would survive here.” The town lacks any accommodation facilities.



Plate 12.5 The gateway to Lough Boora The KDA, on the advice of consultants, have positioned itself as the ‘gateway’ to BnM’s Lough Boora Discovery Park. See: <https://visitkilcormac.com>

For Ed the transition and socio-economic sustainability of Kilcormac is personal. His son-in-law works in peat production at BnM. He, along with his colleagues, faced the challenge of finding new work as production ends. Moreover, Ed is eager to preserve the bogs’ ‘industrial heritage’. He described visiting the Arigna Mining Experience, a tourist attraction in Co.

Roscommon, which tells the story of coal extraction in the area. Ed hoped to replicate this in Kilcormac. His fear for the future is the loss of what he calls ‘artefacts’ in BnM: “You see what’ll happen in... a few years’ time is anyone that has... history if you like, in Bord na Móna will be gone out of it, and the artefacts will mean nothing to the people that are left, and they’ll probably be *dumped in a bin or something* [sorrowful tone]. And it’s very, very sad.”

While community activists had ideas, they lacked a structured plan. In 2018, they formed a relationship with Offaly County Council. Resources were made available through the Rural Enterprise Development Zone fund which paid for the advice of consultants. One of the recommendations which emerged was for Kilcormac to brand itself (see plate 12.5).

Similar efforts are underway the towns of Lanesborough Co. Longford and Ballyleague, Co. Roscommon. Victor (21) is a member of the Lanesboro-Ballyleague Collaboration Group. It aims is to develop the area for the benefit of the communities. Victor said, “Tourism is very lacking in this area and it’s something that we have to develop.” He described nearby boating activities taking place on the River Shannon and said, “It’s just a fabulous place to be. This is a fabulous place to live and work in, if you could get working in it.”

Like Kilcormac, Lanesborough/Ballyleague lacks accommodation, therefore hampering efforts to attract visitors. Victor recalled that there had been two hotels, one in each town, but that these had closed twenty years ago. He cited a lack of capital investment and dwindling customers. Victor regretted their demise and the lack of alternatives: “The good things about Lanesborough made us lazy... We didn’t create bed and breakfasts, we didn’t create self-catering accommodation... [The] people that had the two hotels each side of the bridge – we didn’t encourage them to develop. We just let it happen. And they got old... it just wasn’t paying them.” Victor added, “We need to be able to develop accommodation, but we can’t develop accommodation ‘til we get... until we get something... As it stands at the minute in Lanesborough everything is closing. Bord na Móna’s closing, ESB is closing – it’s a bad news story.” In order to meet these challenges, funding is required. This is examined next.

12.2.3 Funding the transition

In this section, funding opportunities for just transition community development are discussed. The National Just Transition Fund has been the principle funding mechanism (Department of Environment, Climate and Communications, 2022a). BnM itself has successfully applied for

€590,000 from this to help fund retraining of its workforce affected by the closure of production bogs. Following its application to the National Just Transition Fund, the KDA has been awarded €435,796 to develop a tourism hub and remote working hub. However, these projects will deliver modest employment of between five and eight direct jobs (Kilcormac Development Association, N.D.). A second project in Kilcormac will see the redevelopment of a local building. Offaly Local Development Company (N. D.) were awarded almost €1 million to redevelop the Fiesta Hall into a ‘Green HQ’. In Lanesborough/Ballyleague, a ‘food hub’ is set to be developed following an investment of €1.3 million (Naughten, 2020). Naughten added that it would provide employment for over 50 BnM workers. Other successful projects in Lanesborough/Ballyleague include a €1 million award to Lough Ree Distillery and a number of feasibility studies (Department of the Environment, Climate and Communications (2022a). An EU Just Transition Fund worth €84.5 million is set to be made available, with government committed to ‘matching’ this (Department of Environment, Climate and Communications, 2022b).

This section examined community response to the slow closure of the Irish peat sector. It identified Lullymore Heritage and Discovery Park in Co. Kildare as a notable example. This community-led social enterprise provides work to local people and attractions for visitors to enjoy. However, it is dependent on the state supports and would not be viable without community employment schemes. Other communities were identified who are striving towards a just transition. Kilcormac, Co. Offaly, has made efforts to develop an association with the Lough Boora Discovery Park. Initiatives such as these require significant funding. This was discussed with reference to the National Just Transition Fund. In the next section, the just transition of workers is debated.

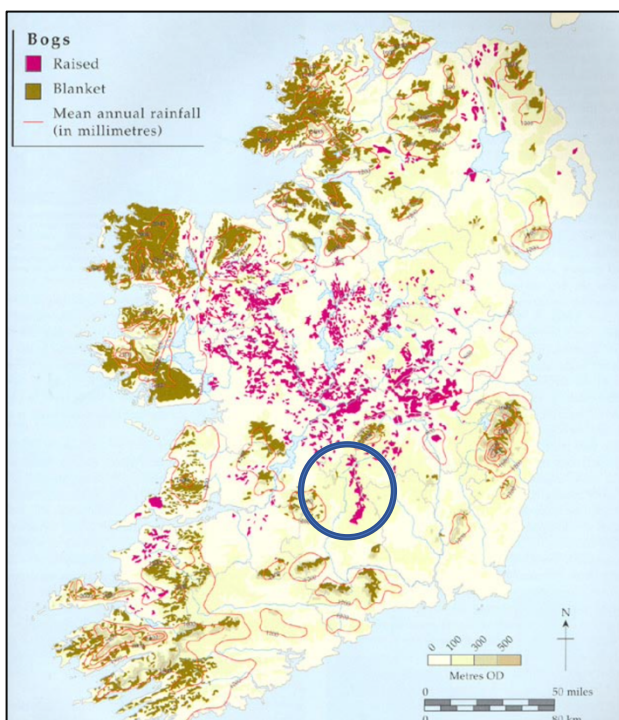
12.3 WORKERS IN TRANSITION

In this section, the transition of workers at BnM and the ESB is examined. A recent example at BnM is the closure of the Littleton briquette factory and the opening of the Bord na Móna AES/Sabrina Integrated Services joint-venture plastics recycling plant. It is discussed first.

12.3.1 Littleton briquette factory

In 2018 the Littleton briquette factory and its corresponding bog group were shut down (see map 12.3). Following prior closures redundancy packages were made available to workers as

compensation for job loss. However, the concept of just transition was gaining traction at the time of Littleton’s closure and additional efforts to support workers made redundant were implemented. Environmental campaigner Anne (11) remarked that it is “a new thing that a company *is* [emphasis] responsible for employees... *beyond* [emphasis] the termination of their contracts.” Training courses were provided to employees and the old factory was repurposed into a recycling plant following a partnership between Bord na Móna AES (the waste division of the company) and Chinese firm Sabrina Integrated Services (SIS). Temporary work rehabilitating the bogs also became available. Hugo (27), Kevin (28) and Finbarr (24) were made redundant when the factory closed, but all were subsequently re-employed.



Map 12.3 A map of Ireland’s bogs in Aalen, Whelan & Stout (2011: 169)

BnM’s Littleton bog complex (circled) is the southernmost extent of Ireland’s midland raised bogs.

Kevin was made redundant from the Littleton briquette factory following its closure in May 2018. He had been its general manager since 2016. He began his career in BnM as an apprentice fitter working on the ‘bagger’ excavators that were used to produce sod turf. Both his father and brother worked in BnM. Kevin was re-employed by SIS to oversee the transition of the factory. Finbarr was also re-employed at the plant following redundancy, but is employed by Bord na Móna AES.



Plate 12.6 Littleton briquette factory in July 2020, undergoing transformation into as a plastics recycling facility.

The new waste recycling business at the former Littleton briquette factory site was under construction when I visited in July 2020 (plate 12.6). It converts plastic wrap into nurdles (see plate 12.7). I asked Kevin about the jobs which had existed before. He said that 63 people worked in the briquette factory, three or four of which were seasonal employees, with roughly 50 working on the bogs supplying its peat. However, employment was much higher in the past – a factor evident elsewhere in this study. Kevin said: “The technology improved and the plant... [had] huge numbers originally. You ended up with eight fitters – it was probably 18 at one stage. So everything was reduced. Everything was improved.” Technological development therefore increased efficiency but had a negative effect on jobs. Kevin explained: “Even the Derrinlough plant is well over 50 years old and that’s still pumping out 130,000 tonnes a year no problem. This plant did the same... Bord na Móna have very good technical [employees] and engineers, all through the years, so [there] was constant improvement, constant change.” He continued: “It was a fully automatic operation, controlled by six people... running the whole plant, from the control room. Everything was measured online, everything was

measured, every tonne... every bale... So you could check online, I could... [go] online and see what line's running, what [was] being produced on each line."



Plate 12.7 Plastic waste to reusable nurdles Industrial plastics are recycled in the new Littleton facility. Discarded rolls are cut up into smaller pieces before conversion into nurdles which can be repurposed into new plastic products.

I asked Kevin whether or not the jobs in the new facility would make up for the jobs lost at the briquette factory. He responded: "Monetarily – the guys in the [briquette] factory were very well paid. There won't be the same level of pay as [there] was in the factory... No, they won't be earning the same." Despite this, Kevin did not express concern for those who received redundancy, have pensions and/or received a new job. Yet the loss of high-value employment will inevitably impact on some workers and the wider community. Moreover, job loss should not merely be measured in economic terms. The end of production on the Littleton bogs had an emotional effect on Hugo. He was made redundant following the closure of the Littleton briquette factory, but was subsequently re-employed along with 21 others by BnM. The workers were tasked with removing the remaining peat stocks and rehabilitating the post-production bog landscape in order that BnM meet its obligations under its Integrated Pollution Control licence. Hugo worked alongside BnM ecologist Frank (6) to raise the water table on the bogs. This was in stark contrast to his previous role of ensuring that the bogs and the subsequent milled peat that was produced from them was as dry as possible. Hugo said it took him at least six months to get used to his new job. He recalled how work on drain-blocking started in October 2017 and that significant progress had been made by Christmas. After the winter break he returned to work. Recollecting this he said: "[I] went up into Bawnmore [bog] just to look around, and it took me two more months after that to open the gate again... It was hard to look at. I couldn't understand... until I got back into... I got into the frame of mind

then... that it was over then. When I saw that I knew it was over.” I asked Hugo what he had seen. He answered:

I saw a load of water [slightly bemused tone]. I saw water. I saw the bog flooded. Parts of the bog we gave years and years trying to drain, tried to get [peat] production off [of] – a sheet of water. And I just turned around and I said... I couldn’t face it, that’s the truth. I couldn’t face it, cause we were used to the value of that peat that was under... under the *water* [voice up, bemused tone]. That was our wages... It was our livelihood for years and years.

Hugo said that despite the challenges, he enjoyed a good working relationship with Frank once he came to terms with the fact that peat production was over. After he began to understand the rationale for rewetting he said he was pleased to work on it. He remarked: “To see the birds back – you see there’s swans, you see seagulls, you see ducks. You know, life. Hares, foxes, everything coming back into the bog. Now I see that, but it took me a while.”

Workers made redundant can seek an allowance from BnM to retrain. Nigel (D) (pers. comms. 9/07/2021) outlined the outplacement budgets for reskilling (table 12.1). This is based on full years of service.

Table 12.1 Bord na Móna retraining budgets Source: Nigel (D) from Bord na Móna, July 2021.

Years worked	Outplacement Allowance €
0 – 10	1,000
10 – 15	1,500
16 – 20	2,000
21 – 25	2,500
26 – 30	3,000
31+	0

Transition efforts by the ESB, BnM’s largest customer, are discussed next.

12.3.2 Transition at the ESB

The ESB is BnM’s energy partner. It is undergoing its own transition following the closure of its two peat-fired power stations ESB Lough Ree and ESB West Offaly in December 2020.

I interviewed Rick (20), an ESB Lough Ree power station (see plate 12.8) electrician in March 2020. I asked him what his job meant to him. He responded: “Work is very, very good. It’s a very *good job* [tone up]. It’s a very good *well-paying job* [emphasis].” Rick then talked of how he values the location of his employment: “I’ve said it to my wife... I could have studied engineering or something like that, but I wouldn’t be working in Lanesborough. That’s why I say to her, I say, “*I could do it, but I wouldn’t be here. I’d be somewhere else*” [playful tone]. You know, and travelling home at the weekends and stuff like that. [The job] suits me *so good* [emphasis].” He added, “I’m four kilometres out the road, and I’m cycling in on my electric bike every morning, and I’m enjoying it tremendously. But I’m thinking, if I hear the radio in the morning about traffic jams here and traffic there, *and I’m thinking – how blessed am I?* [lowers tone] *How absolutely blessed am I?* [happy tone].”



Plate 12.8 Inside the Lough Ree power station Plant inside the power station before it closed permanently. Advances in technology reduced the number of workers required to operate facilities like this through time.

I asked Rick how just transition would be implemented by the ESB. At the time of interview, he informed me that a voluntary severance package had not been negotiated. What he did reveal

was a workforce with different employment terms and conditions like those which had emerged in BnM. Rick said that some people working at the power station were on temporary and/or 'lower wage' contracts. This was part of a system called PCI, or 'Pay, Conditions and Integration'. These workers he said were below 30 years old. I initially met Rick in the canteen of the Lough Ree plant with several of his colleagues having lunch. One of those present, Rick later informed me, was a temporary worker on a one year contract. He explained the rationale for this was that the power station had been set to close, so it made sense to not make the man permanent.

When enacting just transition, Rick said that the approach adopted by the ESB could be considered as 'generational'. He said that some employees at the plant would be redeployed within 45km. They were aged between 30 and 40 years old. Employees between 50 and 60 years old would be offered redundancy, while those older would likely retire. Nevertheless, there was concern amongst staff regarding their future prospects: "*To some extent, people have a lot of concern about* [perplexed tone] their future... We have people... that live in the area that have families... and going to school in the area... they're just wondering... what's going to happen in the future?" Rick identified a flaw in the ESB's relocation approach: "The difficulty is that there's no [other] ESB locations [with] this type of plant. There [are] networks [in] places in Roscommon, Longford, Athlone, and they may suffice for some people to work in certain ways, but it's [a] big change and everybody's fearful."

This section discussed transition in BnM and the ESB. It identified the Littleton briquette factory as a contemporary example of just transition. Workers were made redundant following its closure in 2018 and awarded redundancy packages. One employee interviewed from the plant received €100,000. Workers were also offered reskilling and training courses to help them gain future employment. Some were re-employed on a temporary basis rehabilitating bogs. Others were re-employed in the plastics recycling facility which was established where the briquette factory once stood. Yet these jobs are comparable with previous roles in terms of the remuneration. In comparison, the ESB will make efforts to redeploy its peat-fired power station workforce. However, this may not be a realistic proposition for some due to the distance they may need to travel to gain comparable employment.

In the next section, the use of post-industrial bog landscape is considered in the context of just transition. The model of 'wilderness' is identified and evaluated.

12.4 LANDSCAPES IN TRANSITION

In Chapter Ten and Chapter Eleven, the utilisation of cutaway bogland was examined. Following their rehabilitation, there are decisions to be made on how they can be utilised sustainably. A significant emphasis is being placed on renewable energy. However, much of the landscape is likely to be returned to ‘nature’ given how challenging it is to produce an economic return from these spaces. Visions for the land from outside BnM have emerged.

In section 10.5 Feehan and Kaye (1998) described how wilderness might be implemented into the cutaway. In Chapter Two, the notion of a pristine space without humans was dispelled. From this the idea of human-made wilderness and ‘wild areas’ emerged. However, the creation of ‘wilderness’, or the decision to not use the land at all, can have socio-economic and environmental consequences and may be contested. Alan (3) remarked: “My sincere hope is [the cutaway bogs] are not abandoned, that they’re not left to become, almost uncontrollable, and places where... dumping and stuff like that happens (e.g. plate 9.5).” A model of wilderness for the cutaway bogs has gained traction in recent years. It is not the peopleless space as imagined in the classical sense, but one where human visitors are welcomed.

Two wilderness projects have been identified as part of this study. Both offer different visions, but also have similarities. These are the Mid-Shannon Wilderness Park in Co. Longford, and Wild Nephin in Co. Mayo. Wild Nephin is discussed first.

12.4.1 Wild Nephin

Cutaway bog after-use projects like the Lough Boora Discovery Park, the Grey Partridge Project and Lullymore Heritage and Discovery Park are all controlled and ordered by people, while welcoming natural processes. In their contribution at the Future Use of Cutaway Bogs conference in Offaly, Feehan and Kaye (1998: 11) argued that wilderness be allowed emerge from the cutaway: “We may have lost the last great Irish wilderness of the trackless raised bogs, but we can allow another to take its place if we appreciate the importance of nurturing a new wilderness in its stead.” Their vision was one of light touch, low-cost management, which would see a “mosaic of fen and reed-marsh and water, pine and birchwood and heath, with the small nuclei of regenerating bogs” developing in these once industrially altered landscapes (ibid). A version of cutaway wilderness based on a further study by John Feehan would emerge in Longford in the years that followed. A crucial factor was that instead of excluding people, it welcomed them. Yet this the model as later discussed was not as wild as first envisaged by

Feehan. However, that which emerged in the blanket bog-dominated Nephin Beg range in Co. Mayo was a ‘purer’ form closer to what he imagined.

Conventional wilderness thought places humans *outside* of nature (Cronon, 1996). In describing the Nephin Beg mountains which harbour the Wild Nephin wilderness park, Praeger (2014: 206) wrote of a journey through “untrodden bog... almost frightening in its isolation.” He famously remarked that, “The Nephinbeg range of mountains is I think the very loneliest place in this country (ibid).” The Nephin Beg range lies to the south of BnM’s Mayo bogs, a post-industrial landscape now rehabilitated and subject to wind farm development (Lysaght, 2020).

‘Wild Nephin’ was conceived of by Neville (15), former Head of Recreation, Environment and Public Goods at state-owned forestry company Coillte. He described how Coillte is legally obliged to manage forestry in order to make a commercial return to the state. Its remit is therefore like that of BnM’s. Moreover, there exists, in Neville’s words, an ‘unwritten contract’ between Coillte and the public, its shareholders, which allow for them access to its lands for recreational purposes. From this came the idea of ‘experiential wilderness’ in an Irish peatland context.

Neville’s interest in ‘wilderness’ and outdoor recreation, or as he terms it, ‘going back to nature’, began in the early Eighties whilst he was studying for a master’s degree. In the early-2000s, Neville began to reengage with wilderness literature whilst working in Coillte. He recalled hillwalking on the Nephin Beg mountain range and reasoned that it had all the hallmarks of the wilderness concepts he had been studying. He approached the director of forestry at Coillte with his idea to establishing a wilderness in Coillte’s 4,500 ha of land at Nephin Beg. Neville paraphrased the response he received: “When I look at those forests, I just see underproductive, non-commercial forests that are a problem. When you look at them you see something valuable – I’ll trust your judgement.” Neville reasoned his vision aligned with efforts by the wilderness movement and the European Union to establish wilderness areas across the continent.

Neville set up a small working group from this point including personnel from the NPWS. The collective included professionals in archaeology, ecology, landscape architecture and forest management. NPWS’s cooperation was important as they owned the adjacent Ballycroy

National Park. In 2013 a memorandum of understanding was signed between Coillte and the NPWS that formally created a management structure and the Wild Nephin Wilderness Area was established. The working group had to make a number of decisions. First, they would have to decide the extent of the wilderness. Neville estimated that 2,000 ha is considered a minimum space for such an endeavour. He added: “And that’s a roadless area, and it has the qualities of naturalness, and it has the qualities of remoteness.” Moreover, the group had to consider what wilderness meant to them as a whole. Discussions were had about how to manage wildfire, what activities were to be permitted and what efforts would be taken to counteract the spread of the invasive plant *Rhododendron ponticum*. Neville had a preference that roads should be removed from the wilderness because “Roadless areas are almost one of the definitions of wilderness.” The group debated whether bridges should cross rivers or be removed, and whether phone signal points should be included on maps. Yet Neville does not argue for a pure vision of wilderness.

When considering the definition of wilderness, Neville remarked, “To be honest with you, the more I read about it, the more I am not too sure what it is anymore.” Neville described the lodgepole pine trees in Wild Nephin as being ‘analogues’ for the Scot’s Pines that used to grow there. He said prior to his departure from Coillte, he had worked on thinning out these stands “to almost mirror a forest that was an old remnant forest. It’s not a natural landscape but it can become a wild landscape.” This vision of a human-shaped wilderness is at odds with the primeval landscapes which were envisaged in the United States (see section 2.3). Moreover, it includes humans. Neville said that the first wave of wilderness advocates were ‘experiential people’: “They were talking about what is the experience to them.” Granting public access is necessary in order that this ‘experience of wilderness’ is possible. However, Neville tempered this by stating: “It is not a tourism product.”

I asked Neville what the largest hurdles were when he was working on Wild Nephin. He responded: “If you want to know what the biggest challenge was, [it was] the reluctance to give up control, on everyone’s part.” Neville recalled the words of a director of a wilderness area in Maine, Jensen Bissell, who offered him advice on the Wild Nephin project: “Resist the temptation to improve things.” For Neville, “the biggest challenge was getting people to move beyond their traditional training where we can solve things, to saying, “You know what? Let’s see what nature does here.” However, Jason (10) said, “There’s no such thing as doing nothing with a piece of land.” In other words, doing nothing, is doing *something*.

Neville said that the ‘hands-off’ approach contrasted with that of BnM: “There’s almost an engineering mindset down there. It’s quite different.” I asked Neville if agrees with such measures as the drain-blocking that BnM is engaged in. He responded, “Yes and no.” Explaining his ambivalence, Neville remarked that he was in favour of blocking drains initially “where you’ve done damage,” but he expressed opposition to continual interference in the landscape. The danger with simply ‘walking away’ and leaving natural forces shape the wilderness is that invasive species like rhododendron may engulf the landscape. I put this to Neville. He responded: “It may or may not. We don’t know. Someone asked me, ‘What’s it going to look like in 50 years?’ The answer is, I don’t know. We don’t know. Rhododendron has moved up that valley very much with human intervention. It’s either machines disturbing the ground and then it spreads, or it’s been cut and spreads again. We don’t really know.” Allowing wilderness to develop spontaneously often leads to unimagined outcomes as Neville found: “Let nature respond – it’ll respond in totally different ways than we expect it to, and I think there’s a lot of evidence of land management projects where people thought they were going to get one outcome, and nature throws them a total curveball.”

In this section, the vision for the Wild Nephin was examined. This is a different form of wilderness than the classic example of uninhabited land devoid of culture and history. It is a human-constructed landscape like Lough Boora Discovery Park. People are welcome in Wild Nephin to experience its wilderness characteristics of remoteness and nature. How much intervention there will be in the landscape as it develops is unclear. The next example of wilderness discussed is also one bound up in uncertainty.

12.4.2 Mid-Shannon Wilderness Park

The Mid-Shannon Wilderness Park (MSWP) in Co. Longford is situated in the BnM Moundillon bog group. It is connected to the northern stretch of the Royal Canal and sits adjacent to Lough Ree. Its principal architect is Gregory (33), a planner in Longford County Council. We described how the project came to be and the challenges it faced as it developed.

A vision for wilderness

Gregory began by explaining that the idea for the creation of a ‘wilderness’ in the Mid-Shannon area was arrived at by an association called the Wetlands Wilderness Park Committee. This community group was led by a retired school teacher named John Fallon, from Strokestown,

Co. Roscommon. Gregory recalled Fallon asking the question about what was going to happen to workers once BnM ceased industrial peat production in the area. Gregory said Fallon was keen for the bogs to ‘return to nature’ once production ended, with the resulting landscape providing a basis for tourism. Fallon approached Longford County Council and asked for funding. Once this was granted, he engaged John Feehan to produce a report.

Feehan’s (2004) research examined the viability of agriculture, silviculture and wilderness as industrial bog after-use options. He noted that BnM had no plans at that time to continue converting cutaway bogs into agriculture, citing precarity in the beef farming sector as the reason why. Renou et al.’s (2008) BOGFOR project was underway at the time Feehan wrote his report. Whilst he acknowledged the difficulties of forestry production on cutaway bogs, he nevertheless ‘hoped’ that by growing the correct species and better understanding the soils in which they were planted, up to 30% of BnM’s post-industrial bogs could eventually be utilised for silviculture. However, Feehan’s vision for the cutaway bog landscape drew on ideas of wilderness first and foremost.

It is no surprise given Feehan’s (1998) contribution at the Future Use of Cutaway Bogs (see section 10.5) conference that his Moundillon study would focus on a nature-first approach. He correctly identified that post-production bogs would develop into a mosaic of habitats, included scrub, woodland, fen, and acid grassland (Feehan, 2004). These would sit alongside areas of remnant bog and open water. This, for Feehan, was an opportunity to have a ‘natural world’ experience that would provide socio-cultural benefits for visitors. Furthermore, Feehan argued this new landscape would provide habitat and space for an abundance of flora and fauna; extirpated species like the nightjar (*Caprimulgus europaeus*) and bittern (*Botaurus stellaris*) might even be encouraged to return. These new ‘natural’ places would feed into a broader ecological network, or ‘econet’, of what Feehan (2004: 32) terms a “web of wild places”, or “Wild World Web”, that sees high value natural ‘core’ areas such as bogs, rivers and nature reserves connected across the countryside. Feehan identified how industrial bogs are usually networked together (geographically, in bog complexes, and also administratively, in bog groups) and given many were owned by BnM, decision-making around their future use would be made easier. Feehan’s thinking has similarities to that of ‘rewilding’, which advocates for ‘core’ areas to be connected via ‘corridors’, to facilitate the movement of animals, particularly keystone species, and especially large carnivores (Soulé and Noss, 1998). However, rewilding

and wilderness are two disparate, but oftentimes complimentary ideas; the former placing a focus on biodiversity, while the latter emphasises remoteness and experience.

While it presented a compelling vision, Feehan's study was limited in scope. Gregory (33) spoke of Feehan's (2004) model as "very much an ecological and biodiversity approach to restoring the bogs," but he said it did not provide a 'physical path' on how to produce the wilderness imagined. Gregory and his colleagues reexamined the Feehan's work in 2010 and in 2013 produced their own report called the 'Mid Shannon Wilderness Park'. What emerged was a plan to renature the cutaway and use the old railway lines as greenways for recreational access, whilst not precluding BnM from developing a wind farm within the landscape. In this, environmental, economic and social needs would all be met. Mac An Bheatha, Savage and Smith's (2013: 4) plan would position tourism at its heart, aiming, "to contribute to Ireland and EU biodiversity objectives through the integration of tourism and biodiversity." It would see cutaway bogs converted into 'biodiversity parks' which connected the River Shannon, Royal Canal and Lough Ree into a network.

Gregory engaged BnM about his vision from 2012 onwards, albeit on a limited basis. Cllr. Mick Cahill was a BnM employee at the time and supported Gregory's work on developing the eventual wilderness park. The project commenced in 2014/15 at Corlea Bog under the title 'Corlea Archaeological and Biodiversity Project'. This bog is famous for its Iron Age trackway, or *togher*, which dates from 148 BC (Heritage Ireland, N. D.). Operated by the Office of Public Works (OPW) visitors' centre was built at the site and opened in 1995 in order to both showcase and preserve the trackway.

The rollout of the wilderness appears initially to be relatively straightforward. Longford County Council's role was to develop the greenways throughout the park, while BnM is tasked with rehabilitating its cutaway bogs. Moreover, BnM committed to constructing greenway routes throughout the planned Derryadd wind farm. Gregory described the eventual complexities of how the wilderness park has been constructed and funded to date over a number of phases. It reveals a project costing significantly more than originally envisaged. The following data was collected from Gregory in an interview in July 2021 and later confirmed (pers. comm. 12/08/2021).

Producing a wilderness

In this subsection, details pertaining to the development stages of the Mid-Shannon Wilderness Park (MSWP) are identified and discussed (see plate 12.9).

At the time of Gregory's interview, the park was just 15% complete. The rollout is at times stop-start meaning it was difficult to accurately gauge when some works began and ended and what aspects were funded with each of the grants awarded¹. To simplify matters, this research identified and refers to five distinct sections of the greenway central to the development of the MSWP:

1. Corlea Phase 1: Northern Loop
2. Corlea Phase 2: Royal Canal Greenway connection
3. Northern stretch
4. Southern stretch
5. Bord na Móna section



Plate 12.9 Mid-Shannon Wilderness Park at Corlea, Co. Longford Walking/cycling routes can be seen on the right of the image. In the centre, scrub and forestry have recolonised elevated sections of post-industrial bogland. On the lower levels, water has collected.

The MSWP project began at Corlea Bog and has two phases. Corlea Phase 1 was developed in 2015/16 with a €100,000 a grant from the Department of Rural Affairs for 'outdoor recreation'.

Longford County Council topped this up with €50,000. This ‘northern loop’ greenway is 4.5km and opened in 2017/18. Further funding was sought to continue development. The Department of Rural Affairs provided a second grant of ~€450,000 in 2018/19 for:

1. The Northern stretch – A greenway linking Lanesborough to the townland of Ballynakill and then on to Clondra
2. Corlea Phase 2 – A 6 km route connecting Corlea to the Royal Canal Greenway

Gregory said that the funds were evenly split between both. However, the budget was not sufficient to cover either. Gregory conceded, “We under-priced ourselves every time and ran out of money very fast.” At this point, all three developments had run over budget. Longford County Council subsequently applied for another tranche of funding from the Department of Transport and was granted €200,000 to finish the second phase of Corlea. This section was opened in July 2021. Gregory (pers. comms. 12/08/2021) recalled that the Department of Transport had indicated that more funding may be available. The €200,000 award would eventually form part of a larger €1.5 million grant the council later successfully applied for. This will be invested into both the northern stretch and a new southern stretch that begins at Corlea, goes through Derrycolumb bog to the south through Edera bog and onto Ballymahon (Gregory, pers. comm. 12/08/2021). This is a distance of ~10 km and will be completed by July 2022 (Gregory, pers. comm. 13/08/2021). This brings the project up to 50% completion. BnM will complete the rest after it constructs its Derryadd windfarm in the Mounddillon cutaway bogs.

Challenges in transition

In light of the financial constraints experienced at the Lough Boora Discovery Park, it is reasonable to assume that funding MSWP, especially in the context of its under-estimated budget, would be its most significant challenge. Yet this was not necessarily the case as Gregory explained: “We never thought we’d get the money, but luckily the Irish economy came back up again and luckily the Irish government and state began to move towards providing money for rural areas to develop their natural infrastructure. And so timing was everything – we got lucky.” Instead, one of the principal difficulties Gregory faced was “trying to *bring people along with you* [emphasis]”. Reflecting, he said, “The resistances in people’s minds was [amongst] the biggest resistance we’ve faced.” The perceptions of what the bogs were and what they could be was hard to change. Gregory explained that people viewed them as wastelands,

failed to see their potential and doubted that anyone would want to visit them. Gregory recalled encountering criticism from environmentalists, who he said made comments like: “How can you call it a wilderness? Don’t be ridiculous!” Of these viewpoints he said: “They missed the point... *both sides missed the point* [slight frustration in tone].” Gregory conceded that, “It will never be a natural wilderness, because man has imposed upon it, but we can almost create what I would call a ‘*manmade* [emphasis] wilderness’, and that’s essentially what we’re doing. I asked Gregory if he was familiar with Wild Nephin in Co. Mayo. He responded: “I am aware of it yeah. But that’s a real wilderness, relatively untouched by man.” He described the MSWP in comparison: “We’re talking about... [is] industrial harvested peat bogs...” He conceded, “We came up with that description of a ‘wilderness park’ more as an *attractor* [emphasis] for visitors.” While the MSWP is heavily degraded by human activity, Gregory’s vision is to place it on a path similar to Wild Nephin. Gregory said, “We look at this as a thousand year, ten thousand year *project* [emphasis]. It will be a wilderness... It’s already beginning to turn into a wilderness, and it’ll definitely be a wilderness in 100 years’ time.”

There has been local environmentalist pressure against the development of wind energy within the Mid-Shannon Wilderness Park/BnM Mountdillon bog group. Gregory is supportive of wind power despite local opposition to the installation of turbines in the proposed Derryadd wind farm. The MSWP and the wind farm received a setback when BnM’s successful planning application for the windfarm was overturned in the High Court following a case taken by environmental campaigners (Shannonside News, 2022). Moreover, the Mid-Shannon Wilderness Park Awareness Group is active on social media, regularly posting footage of water being pumped from the cutaway bog. I asked Gregory if such measures to facilitate the wind farm was sustainable, given that all bogs should be maintained in a wet condition to mitigate against carbon emissions. He responded: “If you’re not going to put the wind farm on a bog, where are you going to put the wind farm? You’ve got good quality agricultural land – do you put the wind farms onto the good quality agricultural land *closer* [emphasis] to residential houses? A bog by its nature is a vast, wide area at substantial distances from houses.”

I questioned Gregory if a wind farm is compatible with the wilderness amenity he is planning. He responded: “In my opinion it is. We have a big problem on the planet with climate change and burning carbon. People want to continue to drive their cars and power their houses.” Gregory referred to the Mountlucas wind farm in east Offaly as an example of wind energy and amenity coalescing: “It’s heavily used from an amenity and recreation point of view –

exactly what we're talking about – walks, paths, cycling, right through it. And remember that the footprint of a wind turbine is relatively small to the overall size of the bog. *The rest of the bog goes back to nature* [slight emphasis]. So you get the nature benefit, plus renewable energy – you don't cover it in concrete.”

Gregory argued a balance must be struck between humans and nature. This he contended would happen in the MSWP, where one third of the Moundillon bog complex would go to the wind energy project, with the remaining two thirds returned to nature. Gregory held that the proposed wind farm would produce all of Co. Longford's residential and industrial energy needs. Concluding, he said: “So it's about balance between nature, restoration of bogs, rewetting bogs, humans' needs, human energy needs... These are the choices we have to make.”

Wilderness: A just transition?

The peat-fired ESB Lough Ree power station closed in December 2020, and with it went employment both in the station and on the bogs which supplied it. However, as Gregory (33) explained, some peat workers have been recruited to develop wilderness greenway: “So the Bord na Móna workers would have been essentially let go at the start of the year. But because of the greenway work that we're carrying out, we've managed to keep them employed. So we're looking at possibly two years of good employment for the Bord na Móna workers.” I asked Gregory how many would be employed. He responded: “It's hard to say. It could be twenty, thirty... There's different things goes on at different times and we bring in different numbers at different times. And at the same time they're doing a lot of their bog renaturing work with Bord na Móna. So sometimes they're working on the greenways and sometimes they're working on the bog restoration work.”

The working arrangement described by Gregory is one of precarity. Current greenway work is paid for with Longford County Council's €1.5 million Department of Transport grant. Gregory explained that the Council pays BnM the cost of the labour, and BnM processes the wages for the employees. However, this arrangement is for approximately two years. Gregory said this could be increased to seven years if the wind farm at Derryadd goes ahead.

Gregory claimed that communities are set to benefit from the development of the wilderness park as it provides recreational facilities. He said community groups have supported his plans and are actively involved with the upkeep of the greenways. He explained: “What we're doing

in Ballymahon... is a small group of us go out and maintain the greenway. We go out and litter pick every Sunday morning and we cut the briars at the side and we plant a lot of flowers – wildflowers.” With locals actively engaged and benefiting from the amenity offered by the greenways, Gregory has turned his attention to attracting users from further afield. Tourism, he contended, would have a “knock-on effect” for local businesses: “[Visitors] will require accommodation, they’ll require food, they’ll require drink, and so that begins to build a tourism industry in Longford that we don’t have. We’re the least visited county in Ireland. So we’re hoping to switch it to... not the most visited, but a well-visited county.” MSWP is adjacent to Centre Parcs in Ballymahon, Co. Longford, which opened in 2019. Gregory said: “We weren’t planning for Centre Parcs when we were... starting off doing our Mid Shannon Wilderness Park, but suddenly it came as a huge add-on.”

12.5 CONCLUSION

This chapter evaluated actions taken to ameliorate socio-economic decline in the context of the closure of the Irish peat industry. Community efforts, including the development of the Lullymore Heritage and Discovery Park, were discussed. It was found that community response to the closure of the peat sector are dependent on state supports. Without a rebalancing of the national economy away from major population centres, midland community dependence on the state is likely to continue.

Workers are being transitioned in BnM and the ESB. The transition of BnM’s Littleton briquette factory was ongoing during the course of the present study. Workers made redundant had been offered retraining. Some were re-employed on bog rehabilitation. Others were rehired to work in the Bord na Móna AES/Sabrina Integrated Services recycling facility that opened in site of the former briquette factory. While these efforts are commendable, the new jobs do not have the same level of pay and/or security as previous roles in the company. Therefore it is difficult to describe these roles as ‘just’.

The final section examined the utilisation of post-industrial bogland. Two peatland wilderness projects have been developed in recent years: Wild Nephin and Mid-Shannon Wilderness Park. The former is a wilderness *experience* based in Co. Mayo blanket bog. The second, Mid-Shannon Wilderness Park, is located in BnM post-industrial bog in Co. Longford. While Mid-Shannon Wilderness Park offers employment, albeit temporary, to BnM workers who lost their

jobs following the closure of the Lough Ree power station in 2020. A wind farm is planned for the wilderness, but it is not known if this will proceed due to ongoing legal action against it. The future of the development is unknown if the renewable energy project does not proceed.

All three categories discussed face significant challenges. The main concern for communities is that they are dependent on government supports. Workers face declining pay and conditions in a 'transitioned' BnM. Lastly, the future of the land and how it is utilised, if at all, is unknown. This raises questions about the vision of the state and its implementation of the just transition it committed to in the Paris Agreement.

Footnote

¹ A higher degree of accuracy would have necessitated an archive search. This was not possible due to budgetary constraints, time limits on fieldwork and the difficulties presented by the Covid-19 pandemic.

PART III: SYNTHESIS

CHAPTER THIRTEEN: DISCUSSION

13.1 INTRODUCTION

In this chapter, the research questions outlined in section 1.3 are answered using the data presented in Section Two. Moreover, the literature from Chapter Two and the geographic data collected in Chapter Four are used as a lens for analysis. Once each of the research questions is addressed, just transition of the bogs is considered. To begin, the chapter discusses how people have *produced* the Irish midland bog landscape.

13.2 THE PRODUCTION OF BOGLAND

The raised bogs of Ireland slowly emerged from shallow lakes that formed at the end of the last Ice Age. Without mountains to halt their progress, they advanced across the Central Plain largely unchecked. The resulting Bog of Allen stretched from Co. Kildare in the east all the way to the River Shannon in the west. Rather than being a single peatland, this was instead an interconnected complex of individual bogs rising up to tower over the surrounding landscape. They were an Irish wilderness.

Today, the Bog of Allen has been significantly diminished. For centuries, people have cut turf from peatlands for subsistence and drained and reclaimed their waterlogged habitat for agriculture. Mechanised extraction during the twentieth century to meet the energy needs of the fledgling Irish state brought jobs to the midlands region. During the 1950s, BnM built housing estates for its workers, forming communities in time. Homes were lit with electricity generated from the bogs' copious peat resource, and warmed with turf saved the previous summer. As with all fossil fuels however, peat is a finite resource. As the bogs were cut away and government priorities changed, decline slowly set in. Jobs were lost, bogs were closed, plants were shut and local business eroded.

The peatlands of Ireland are socio-natural landscapes that have been worked by people through manual and mechanised means. Castree (2001a) argued that social nature is political. The present study has produced an account of the decline of the peat industry through time which has had implications for those dependent on the sector. It has also revealed that the bogs

integrated into this mode of production have been in a long transition out again. Both trajectories bring their own challenges. Attempts to counter decline by producing economic value from the cutaway in the shape of forestry, farming and biomass have proven to be uneconomic.

The aim of this study was to critically examine, and present an account of the closure of, the Irish peat-for-energy sector. A series of questions were developed to assist in this understanding. The research began with a review of literatures pertaining to human/nature interactions. Themes of wilderness, social nature, capitalism, labour and justice emerged and informed a lens later used in the analysis of semi-structured interviews conducted with a range of stakeholders. Each of the research questions will be answered in the remainder of this chapter.

13.3 THE CLOSURE OF BORD NA MÓNA'S INDUSTRIAL BOGS

In January 2021, Tom Donnellan, BnM's chief executive, announced the closure of the company's industrial bogs. For more than eighty years, BnM extracted turf and milled peat, mostly in the midlands of the country. When considering the impact of the closures, the first question to emerge was:

Why has Bord na Móna ceased extracting peat from its bogs?

In his announcement, Donnellan outlined that BnM was embarking on a 'Brown to Green' strategy that would see it move away from peat and towards the provision of 'climate solutions'. As part of its new business model, the company would seek to develop business opportunities in low carbon sectors such as renewable energy and recycling. This, Donnellan claimed, would contribute towards the state's aim of becoming carbon neutral by 2050. From this statement, it appeared that BnM have very real concerns for the environment and/or had spotted a market opportunity to produce environmental commodities. While this may be the case, a critical lens was applied to his statement and other perspectives were sought. The data collected was outlined in Chapter Seven. This research identified two aspects: slow closure and sudden cessation.

BnM was established to provide a secure source of indigenous energy and employment in the otherwise underdeveloped midlands. In response to the oil crises of the 1970s, BnM expanded its operations, including into smaller bogs. This provided short term energy but came at a substantial long term economic cost to the company. By the mid-1980s its was heavily indebted and outcompeted. Its social remit made way for a new economic reality.

Slow closure of BnM bogs resulted from the economics associated with their being cutaway. While production bogs are generally flat at the surface, underlying subsoils often undulate. As the peat was milled away during production, underlying mineral soils would begin to surface. These would contaminate the peat if accidentally extracted. If spoiled peat was used in a factory it could cause damage and incur expensive repairs. Moreover, manoeuvring around resurfaced geological features in production bogs increased costs. Bogs were often abandoned before their peat was fully extracted.

Further economic factors played a significant role in the recent rapid closure of the peat industry. The EU Emissions Trading System (EU ETS) places a price on carbon at industrial facilities, including BnM's Edenderry power station. These must be purchased if a given plant's allowance is exceeded. These became increasingly expensive. Furthermore, the PSO subsidy which enabled peat to be economically viable when used for electricity generation began to be removed from peat-fired power stations from 2015. In December 2020, BnM lost its largest customer for milled peat, the ESB. This arose when the latter failed to secure planning permission for the continued operation of its West Offaly power station in west Co. Offaly. In light of this decision, the ESB decided not to seek permission for its other peat-fired plant, Lough Ree, in Co. Longford. However, BnM could still operate milled peat production to supply its briquette business and the lucrative market for horticultural peat.

What closed the peat industry significantly ahead of schedule as per BnM's 2015 *Sustainability 2030* plan was a September 2019 High Court ruling by Justice Garrett Simons that set aside government legislative mechanisms that would have enabled industrial scale peat extraction to continue via regulation under the EPA's IPC licencing system. Justice Simons ruled that the state's legislation was in breach of the EU's Habitats and Environmental Impact Assessment directives. Following the ruling, extraction above 30 ha was effectively banned.

The ruling by Justice Garrett Simons in September 2019 in *Friends of the Irish Environment Ltd. v. Minister for Communications, Climate Action and Environment, the Minister for Housing, Planning, and Local Government, Ireland and the Attorney General*, in favour of the plaintiff effectively banned industrial peat production in Ireland. A number of the participants in this research (see Chapter Seven) blamed the government for the closure of the bogs when in fact it attempted and failed to keep them open. The socio-economic consequences are examined next.

13.4 SOCIOECONOMIC CONSEQUENCES OF INDUSTRIAL BOG CLOSURE

The closure of the peat sector will have social and economic consequences for the future of the wider the midlands (NUTS3 Midlands region plus west Kildare, north Tipperary and east Galway). The study inquired:

What are the socio-economic implications for peat workers and midland communities once industrial bogs close?

When considering the future of workers and communities a study of historical relations was developed. Workers from BnM were asked (section 5.2) what their jobs in the company meant to them. Three themes merged: family, social interaction and life itself. Several of those interviewed spoke of families raised from BnM wages:

“They educated my family... they paid my mortgage” – Bob (2)

Hillary (25.2), whose father worked in Bord na Móna said:

“We had [a] big family, one wage. Bord na Móna provided that wage”

Friendship and collegiality was also considered an important aspect of the job:

“What really benefitted me was coming into a company like Bord na Móna and the support I got from... a whole range of colleagues” – Frank (6)

“Bord na Móna is... like a big family... everyone helps each other” – Gordon (19)

The theme of life itself was found throughout the testimonies given:

“I made a good living out of [Bord na Móna], a good life” – Hugo (27)

“It’s been a significant part of my life... more than significant – it’s been all my working life” – Donal (1)

The closure of BnM’s peat business therefore has significant drawbacks for workers and their families. Moreover, their jobs once sustained vibrant rural communities. Two respondents equated peat with basic food staples. Brendan (30) said that the bog put “bread and butter on the table for you,” while Hillary (25.2) similarly remarked that BnM was “Everyone’s bread and butter.” This reveals the fundamental importance of the bogs to people’s livelihoods. The loss of peat sector employment leads to reduced commercial activity in adjacent towns and villages. Many of these settlements, like Kilcormac, grew as a result of BnM’s housing developments in the 1950s. Three small businesses based in the peat industry hinterlands were identified during fieldwork. Each discussed their socio-economic connections to the sector.

The shop eventually owned by Gabriel and Hillary (25) opened in 1939 to serve the needs of workers hired to extract turf from the Clonsast group of bogs in east Co. Offaly. The couple described how the business grew in line with development of the bog group, before decline slowly set in as they became increasingly cutaway. Fergus (23) also lives and works in east Co. Offaly. He runs a bar adjacent to a the now closed BnM Croghan briquette factory. The business began trading in 1964, three years after the plant opened. It was commercially successful up until the late-1980s when BnM began to let workers go for the first time. However, the closure of the factory in 2000 and the bogs which supplied it had the most significant impact on Fergus’s bar. This was exacerbated three years later by the closure of the nearby ESB Rhode power station. Like the 1993 closure of ESB Allenwood power station and the Lullymore briquette factory in Co. Kildare, the shutdown of Croghan briquette factory was twinned with the closure of a power station.

Decline was felt across the midlands as the peat sector slowly closed. Victor (21) is a small business owner and community activist from Lanesborough, Co. Longford. His retail business is located near to the ESB Lough Ree peat-fired power station that closed in December 2020. We spoke in the month prior. Rather than anticipating that his shop would experience a

precipitous drop-off in trade after the plant's shutdown, Victor said that its workforce at the time was just one quarter of what it had been in the past. Therefore, the worst of the economic effects had been experienced. In Kilcormac, Co. Offaly, retired BnM worker Gary (8) supports this finding:

“We've seen that downturn in Bord na Móna going on [for] a while now. It's not just a 'snap' [emphasis], it's been reducing and reducing, but with the end of life... coming from Bord na Móna, that's going to have a huge impact.”

Garry added that the repercussions would be felt widely:

“It's not just Bord na Móna, there's people supplying them with materials and supplying food – there's a bigger circle of people going to be affected.”

The slow decline endured by communities dependent on the peat sector was also felt by those within BnM itself. Between 1984 and 1992, over 4,400 full-time and seasonal jobs were lost. The operations were fundamentally altered by Eddie O'Connor, who took over as managing director in 1987, in response to the debt it had accrued following its third major expansion in the 1970s. However, those workers who were retained were incentivised to produce more, better quality peat and were rewarded for their efforts. This was not to last.

Evidence was collected on how BnM had modified its employee relations in recent years. Elaine (13) described an 'old style' BnM and a 'new style'. Bob (2) concurred:

“The culture within Bord na Móna has changed in the last number of years.”

“Anyone that came into Bord na Móna now is probably on a *contract* [emphasis].”

Ed (4) added:

“The way they're treating people now... It's almost like they're in there to close the place now. It's a bit disturbing.”

The seasonal worker model which saw extra labour employed during the peak summer production months was revised. In its place emerged a system where workers were given six or nine months' employment before being laid off. Seasonal worker Gordon (19) summed up his frustrations:

“[Bord na Móna] take us when they want us and let us off when they want to.”

The difficulties faced by seasonal workers was extended into a new working category: Revised Feedstock Terms (RFT). Trade unionist Nick (16) summed this up:

“People were brought in *doing the very same job as everybody else* [tone up], but they're on a lower wage.”

A context of precarious labour leading into the closure of the peat-for-energy business may have further heightened anxiety across the workforce. When asked about the future of BnM, Derrinlough briquette factory worker Henry (26) said:

“*I don't know what's going to happen to us* [emotional tone].”

Henry added: “There will be an awful, awful lot of jobs lost.” He described that this included 60 workers employed in the factory, 60 who supplied the peat from the bogs, and an unknown number who were employed indirectly.

The broader socio-economic consequences of the closure of the peat sector are clear. Direct and indirect employment will be lost in the Irish midlands. However, the sudden end of the peat industry is also the conclusion to a long closure. People in the Irish midlands have been experiencing declining fortunes since the late-1980s, notably commencing with the shutdown of the Portarlinton turf-fired power station in Co. Laois. It was followed in 1993 by ESB Allenwood turf-fired power station and the Lullymore briquette factory in Co. Kildare, Croghan briquette factory in Co. Offaly in 2000, and ESB Ferbane and ESB Rhode in 2003 in Co. Offaly. There were some mitigating circumstances. Edenderry power station opened in 2000. ESB Shannonbridge and ESB Lanesborough were closed in between 2003 and 2004 and replaced by more efficient power stations. But as Victor noted, employees reduced through

time. This, Kevin (28) explained, was because technology had advanced (see subsection 12.3.1). In the next section, the utilisation of the land itself is considered.

13.5 UTILISING THE CUTAWAY

In this section, the future use of cutaway bogs is considered. To gauge this, the thesis examined how cutaway bogs were utilised in the past. Therefore the research question asked was:

What will become of the post-industrial bogs? How have these landscapes been utilised historically?

From as early as the 1950s, efforts to reuse the emerging cutaway landscape were underway (Mooney, 1958). In the Clonsast bogs, trees were planted and initial results were favourable. During the 1970s, agriculture as after-use was favoured. In the early 1980s it was believed that a new country for farming would emerge once the ‘waste’ bogs were finally removed. Peat workers would be redeployed in the agri-foods sector. However, it was discovered through trial and error that only a small proportion of cutaway bogs were suitable for conversion to agriculture. Moreover, it was expensive. Silviculture proved as difficult. Adverse climactic conditions and low-nutrient peat substrate required careful husbandry, therefore increasing costs. The BOGFOR trials concluded that forestry on bogland was feasible but only in particular contexts (Renou-Wilson et al., 2008). Gillian (18) said that a single after-use which could be applied to all bogs was not feasible as each was unique. A one-size-fits-all after-use ‘recipe’, as she called it, was not possible.

The idea of using cutaway boglands as amenity took hold in the BnM Boora group in the early 1990s. This has had significant social and environmental benefits. Lough Boora Discovery Park has emerged as a ‘model’ post-industrial landscape. Like many other ruderal ecologies it is highly biodiverse. However, the park is expensive to maintain, raises little revenue and provides few jobs. Despite its high-profile standing, it has not been replicated by BnM elsewhere.

In the late-1990s, BnM became increasingly aware of the environmental degradation that arose from its eroding cutaway in Co. Mayo. Moreover, it had begun to fall under the IPC licencing system. A rehabilitation programme for post-industrial bogs was commenced. In the years of

research that followed, it was found that cutaway bogs should be rewetted. Large waterbodies would provide wildlife habitat, but were found to produce methane. Ideally, the cutaway bogs' water table should be brought up to, or just below, the surface. This would create a landscape which was soggy, but not flooded. Natural revegetation would then occur. This would mitigate against continued carbon dioxide emissions. In the future, these landscapes may evolve into fens; the precursors of raised bogs. However, rehabilitation is challenging. Complicating factors include variations in landscape elevation and topography. Barry (22), a BnM landscape manager, said that half of the company's bogs were gravity drained (higher elevation), while half were mechanically pumped (lower elevation). He concluded that 25% of BnM's landholding could not realistically be rewetted. Moreover, elevated features in post-industrial bogs such as high fields and headlands could not be rewetted even if the surrounding landscape was. These areas may in time become heath, acid grassland or birch forests, but will continue to emit carbon dioxide and could pose a fire hazard.

Efforts to rewet cutaway bogs were initially rudimentary due to constrained resources. In a public presentation, McCorry (2021), a BnM ecologist, revealed that the ecology team tasked with fulfilling BnM's IPC obligations to stabilise post-industrial bogs had access to just one digger in 2015. Approximately 20,000 ha were rehabilitated during this resource-constrained process. Following an investment of €108 million from the Irish state and the EU, plus a contribution of €18 million from BnM itself, a further 33,000 ha of bogs are being enrolled into an 'enhanced' rehabilitation programme that would employ a more thorough rewetting approach. Short-term employment will be offered to redundant peat workers.

Efforts to find productive use for the cutaway have been ongoing for decades. High costs associated with conversion and crop husbandry, coupled with variations across space in peatlands' chemical composition, topography and elevation have all impacted on the economic viability of the after-use options trialled. Wind farms, tourism and amenity offer limited direct employment but provide a range of benefits. Yet each have drawbacks. There is no one 'recipe' for the bogs as Gillian (18) argued. Trade-offs must be made when implementing after-use.

13.6 LESSONS IN TRANSITION

When considering the future of the bogs and the communities that depend on them, it is useful to consider peat-related transitions of the past. This leads to the following question:

How have peat-for-energy transitions been managed in the past? What lessons, if any, can be applied to contemporary just transition efforts?

The transition of turbary bogs into Special Areas of Conservation was identified as a notable example. This saw the state identify a range of bogs of scientific importance for preservation under the EU Habitats Directive. This was contested by those with an interest in continued turf-cutting. It in itself presents further empirical evidence of the challenges inherent in transitioning peatlands from one use to another. The relations that turf-cutters and contractors hold to the bogs are as strong as those held by stakeholders in the peat industry. Brendan (30) said:

“The bog has been a way of life for me.”

“It’s in our hearts... it’s like a possession... It’s like something you fought for.”

Mike (14) said turf-cutters are oftentimes older people and those on lower incomes. The economic value placed on turf is a significant factor in its continued use. Those who own a turf bank can access a fuel that heats their homes for half the price of oil. Nick’s (16) turf costs him €1,000 per annum. He said the equivalent amount of oil would cost €2,000.

Turf-cutters from Clara Bog recalled their interactions with government authorities during the implementation of turf-cutting restrictions on protected bogs. While the NPWS may have been under-resourced, it is nevertheless a powerful state institution. Interactions were often initiated by turf-cutter representatives. To buy time to deal with the problem of turf-cutters’ refusal to stop working the bogs, the government unilaterally imposed a ten year derogation. This allowed turf-cutting to continue unabated in SACs. This was too long according to Graham (9), an ecologist at the NPWS, who remarked, “Everybody put their head[s] in the sand.” In 2007, Dermot (34) recalled how renegotiations were initiated by the turf-cutters and an eventual compensation and relocation settlement was agreed between Clara Bog turf-cutters and the state. Acrimony continued elsewhere in the country. The Peatlands Forum of 2012 allowed turf-cutters to vent their frustrations in front of a judge. For Jason (10), this was an opportunity for justice. Justice Quirke (2012) concluded that turf-cutters had acted in good faith and he suggested a new strategy to deal with the impasse be produced.

Irish state bodies made a number of mistakes in their dealings with turf-cutters and handling of the turbary-to-SAC transition. Based on the testimonies collected for this study, the following errors were identified:

- A top-down approach was employed by the state
- There was no initial consultation with turf-cutters
- The rationale for curtailment of turf-cutting was not explained to those affected
- There was no legal basis for the ten-year derogation
- Some sites which should have been protected were not
- Turf-contractors were excluded despite them being important stakeholders
- The socio-economic value of turf-cutting was not acknowledged initially when turf-cutters were disbarred from their plots
- Five-year active turf-cutting rule has caused disquiet amongst turf-cutters
- Justice Quirke did not acknowledge the environmental value of preserving bogs

These findings must be considered when planning of future bogland transitions, especially that of BnM and the ESB.

13.7 A JUST TRANSITION

A review of contested human/nature relations lead to the concept of just transition. Massey (2005) framed space itself as inherently political while Healy and Barry (2017: 452) described the just transition process an “intensely political” and a “deeply political struggle.” This is apparent when considering both the impact on workers as the Irish peat industry closed and as turbary bogs were transformed into Special Areas of Conservation. Employees who produced energy from the Irish raised bog network have been expelled from the land they once worked. Perhaps even more concerning, turf-cutters were driven from the plots they had legal rights to with no consultation and no compensation. While these actions may alleviate further environmental degradation on these rare habitats, therefore contributing towards the greater good, steps to protect the livelihoods of those displaced must be carefully planned and implemented in an inclusive fashion.

Efforts to implement a just transition have in some cases been led by community activists. In the Clara Bog turbary-to-SAC transition, attempts to resolve the conflict between the state and the turf-cutters were advanced by two community activists. Moreover, this research identifies the actions of private citizens in response to peat plant closures as having long-lasting positive impact for workers and the wider community. In 1993, ESB Allenwood power station and the Lullymore briquette factory both closed in Co. Kildare. Concerned about the future of the area, Sean Judge opened up an exhibition which would eventually evolve into the Lullymore Heritage and Discovery Park. His initiative has seen hundreds of people receive work experience through its Community Employment scheme. While it is unrealistic to expect this social enterprise to have provided work for all those affected following the closure of the adjacent peat plants, it is nevertheless an example of a project firmly within the spirit of just transition.

When Leopold (1995) used the term 'just transition', he did so with specific meaning. Just transition would cushion workers completely from the sunsetting of environmentally damaging industries. Workers, he held, should not be subject to any loss of wages between the time they were made redundant and reemployed. The burden of closure and transition would be shared out across the society that was set to benefit environmentally. However, the redeployment of a workforce with specific skills is challenging. Given the range of operations at the ESB it would conceivably be easier to redeploy its peat-fired power station workforce to a similar station. Redeploying BnM workers who have extracted peat or drained bogland is more difficult.

Missing from discussions around just transition are the perspectives of workers. The contested nature of the turbary bogs to SAC transition tells us that those directly impacted by land use decisions made by the state should be part of the decision-making process. There is no evidence that this has occurred in BnM. Yet the company has taken positive steps towards a just transition. It has offered its exiting workforce training courses. Finbarr (24) acquired a licence to drive lorries with hazardous materials through this initiative. However, the reskilling of employees for a different form of work may be challenging. Henry (26) cannot read or write. This does not affect him in his current job but will limit his future employment prospects. A short training course would be inadequate to meet his particular needs.

Communities themselves have responded. Finance has recently been made available through the National Just Transition Fund and has been drawn down by communities and rural

businesses to pay for various initiatives and surveys. However, the extent of employment that these will generate is unknown. Estimates are modest. Between five and eight people will be employed in the Kilcormac Development Association's (N. D.) tourism and work hub. Furthermore, many projects funded are not directly related to the closure of the peat industry (see: Department of the Environment, Climate and Communications, 2022a). The community-led Lullymore Heritage and Discovery Park has been a successful just transition endeavour, albeit one dependent on state supports to remain a going concern. BnM's repurposing of its Littleton briquette factory with Chinese partner Sabrina Integrated Services is perhaps the most complete example yet of what can be expected in future. High-paying jobs went following the plant's closure in 2018, although the factory had slowly been reducing its workforce as technology improved. Workers who had supplied it with peat were made redundant, but subsequently re-employed to rehabilitate the bogs on short-term contracts. This work proved challenging for Hugo (27), given he had worked to drain bogs rather than flood them. Briquette factory employees re-hired to work in the emerging plastics recycling plant are on lower wages than before. This contravenes the principles of a 'just' transition.

As the contested nature of the peat industry continues to play out, new visions for the land itself materialise. BnM is prioritising renewable energy and carbon sequestration in its landbank in order to meet Ireland's international climate change obligations. Yet employment in the renewable energy sector is low. Tourism has emerged as an option to bring jobs to areas impacted by bog closures. The Mid-Shannon Wilderness Park will enhance Co. Longford's overall tourism offering, but in itself will not generate much, if any, revenue. The Lough Boora Discovery Park in Co. Offaly has proven to be a successful amenity and biodiversity hot-spot. However, it does not generate enough revenue to cover its costs, and is therefore dependent on BnM to subsidise it. The bogs will likely remain contentious landscapes for some time to come.

13.8 THE WILD BOGSLANDS RETURN

The Irish midland raised bogs have been transformed through human labour. These spaces have been described as 'brown deserts' (see plate 13.1) during production. Once peat extraction ends, natural processes begin to reassert themselves (see plate 13.2).



Plate 13.1 Post-industrial bogland, Co. Longford This image was taken shortly after extraction ceased in the Moundillon group of bogs. These landscapes have been described as ‘brown deserts’, as little life is present.



Plate 13.2 Revegetated cutaway bogland, Co. Offaly Post-industrial peatlands, left to their own devices and with the right hydrological conditions present, will revegetate in time.

The United States Wilderness Act of 1964 largely excludes people from the wilderness landscape. While Feehan (2004: 29) avoids explicitly defining the term, he associates the emerging cutaway bog ‘wilderness’ with scale and wildlife. However, wilderness and rewilding are terms which should not be conflated.

In May 2019, the Irish government declared climate and biodiversity emergencies (Cunningham, 2019). Much consideration has been given to the carbon storage capabilities of bogs in the context of the former (see section 4.9). However, the potential of these landscapes to ameliorate the latter has arguably been overlooked in contemporary peatland discourse. Yet the Grey Partridge Project discussed in section 10.6 indicates that post-industrial bogs have the potential to provide vital habitat to a myriad of threatened species. Recent reports (Jones, 2021; Bord na Móna, N. D.c) of the return of marsh harrier (*Circus aeruginosus*) and common crane (*Grus grus*) to Ireland provide further evidence of the ecological potential of these spaces. However, not all post-industrial bogland is suitable for rehabilitation like enhanced rewetting.

Gillian (18) argued there is no one-size-fits-all approach to managing post-industrial bogland. As such, the post-industrial bog landscape produced by BnM will not be in-whole ‘returned to nature’. The company will develop renewable energy projects in appropriate cutaway bogs in order to support national efforts to reduce the use of imported fossil fuels. Some of the bogs will be rewetted while others will ‘scrub up’ and eventually climax into woodland. These might return to a form of ‘wild space’ (see figure 2.1) as envisaged by Wild Europe Initiative (2013). Alternatively, they could be considered ‘fourth nature’, as conceptualised by Kowarik (2017). In this, former industrial sites are returned to a state in which natural processes dominate in part as a result of human inaction.

Caution is advised when describing the post-industrial bog landscapes as wilderness. The ‘pure’ wilderness ideal defined in the United States Wilderness Act of 1964 was subsequently critiqued by Cronon (1996) and others (see section 2.3). The vision of the emerging post-industrial bog landscape as ‘wilderness’ has been advanced in both Wild Nephin, in Co. Mayo (see subsection 12.4.1) and in the Mid-Shannon Wilderness Park (see subsection 12.4.2). Both Neville (15) and Gregory (33) acknowledged that while these boglands are wild places, they are ones shaped by people through time. Moreover, both welcome people into the landscape. For Neville, Wild Nephin is a space to experience wilderness, whatever that may be.

What is likely to emerge in the decades to come from the post-industrial boglands are a variety of yet unknowable land and waterscapes. The raised bogs, with their unique flora and fauna that once dominated the midland Central Plain, are largely gone due to land reclamation for agriculture, turf-cutting for domestic heating needs and industrial extraction to fuel economic growth in the twentieth century. A fraction of the original Bog of Allen complex remains in varying states of degradation. Yet the ‘wild boglands’ portrayed by Bellamy (1986) in his titular volume have the potential to re-emerge as something new: a socio-natural space where the industrial heritage of the past is valued alongside a new mix of flora and fauna.

The emergence of post-industrial peat landscapes presents challenges for policymakers. These spaces were successfully developed by the state during the mid-twentieth century to counteract regional socio-economic disadvantage. While wild spaces will help alleviate the biodiversity crisis, there are justice implications for those who once depended upon the peat industry. Both tourism and renewable energy offer opportunities for local communities to pivot toward more sustainable enterprise, but their contributions to employment will not be on the scale of the extractive activities of the past. Without substantial investment, clear strategic objectives and detailed planning there is a danger that the Irish midlands may regress and the socio-economic gains which arose from the activities of peat industry may be lost.

13.9 CONCLUSION

This chapter answered the research questions outlined in Chapter One with reference to the data presented in Part Two, through a lens informed by the literature of Part One. It reveals a challenging and contested political space. A singular approach to just transition in the context of the post-industrial bogs will prove difficult. In the last chapter, conclusions are drawn and recommendations for policymakers, and suggestions for further research, are made.

CHAPTER FOURTEEN: CONCLUSION

14.1 CONCLUSIONS AND RECOMMENDATIONS

The aim of this study was not to solve the challenges faced by peat workers and the communities they live in, but instead to present a critical account of the transition of the BnM industrial bogs through time and across space.

The thesis makes a number of important findings. First, it contributes empirical data to debates around just transition, which has tended to focus on the coal industry in major economies such as Germany, Australia, the United States and China. Second, it identifies that the closure of the Irish peat industry has taken place over a long period of time: a slow decline. Third, it reveals that BnM has simultaneously been in a long transition out of peat production as it attempted to find new economic uses for the socio-natural cutaway bog landscape it produced.

Communities and workers have responded to the slow closure of industrial bogs. BnM and its partners have worked on ways to utilise these landscapes in their slow transition. None of the after-use options identified fully meet the needs of workers, communities, or BnM itself. Moreover, wind farming, while central to BnM's Brown to Green strategy, does not provide significant employment, can be prove divisive when placed adjacent to communities, and can have environmental consequences, including carbon release when bogs are drained to facilitate them. There is no one-size-fits-all response to the challenges presented in this research.

The story of Ireland's industrial bogs is not linear or stable, but one of simultaneous decline and transition. It has been shaped by state policies, market forces, environmental limitations, changing attitudes and social relations. Their future is yet to be determined.

14.2 POLICY RECOMMENDATIONS

This research makes the following recommendations for policymakers:

- The National Peatlands Strategy (National Parks and Wildlife Service, 2015) should be updated to reflect the requirement for Just Transition for those affected by the closure of the bogs
- Workers and communities impacted by the closure of bogs must be part of discussions and debates concerning the future of the midlands
- A study should be conducted to assess the viability of cutaway bogs for wet cultivation of crops given the biomass demand from Edenderry power station. A partnership with experts from the University of Griefward, Germany is recommended
- 53,000 ha of rehabilitated and enhanced rehabilitated cutaway bog will emerge in the coming years. They have potential to mitigate the biodiversity emergency ongoing in Ireland. These spaces will require a management plan, similar to the *Nation Raised Bogs Special Areas of Conservation Management Plan 2017 – 2022*, be put in place to prevent their degradation
- Approximately 20,000 ha of cutaway bog cannot be rewetted. Residual peat poses a fire hazard, particularly in the context of an ever-warming climate. Due consideration must be made for those living in and around these landscapes and efforts made to mitigate risk to their lives, homes and businesses

14.3 FURTHER RESEARCH

The present study adopted a general rather than a specific perspective to the study of Irish industrial bogland transition. There is scope to develop detailed case studies of individual bog groups. This would enable significantly increased focus on notable events. Several accounts specific to individual bog groups or peat plants have been published. These include BnM's *Bogmen be Proud* in 1997 and *Deep Mapping – Lough Boora Sculpture Park*, both of which focused on the BnM's Boora group of bogs. *Powering the West* by Christy Loftus and James Laffey covered BnM's Mayo bog group, while *Portarlinton Generating Station 1946 – 1988* by Jon McCowen and Pat Culleton detailed the history of the titular power station. While useful historical documents, these do not present critical accounts.

A change in emphasis in BnM from biodiversity to carbon sequestration is apparent when considering its publications in the recent past. In its *Strategic Framework for the Future Use of Peatlands*, BnM placed an emphasis on biodiversity. It had previously produced the *Bord*

na Móna Biodiversity Action Plan 2010 – 2015 emphasising the company's commitment to wildlife. Today, following investment of €108 million by the Irish state and the EU, its environmental focus has shifted to carbon. Further research is suggested in order to carefully assess why this change has occurred, and whether biodiversity provision, carbon sequestration and renewable energy projects are compatible.

A study similar to the present research focused on the ESB would be useful for a comparative analysis. Both companies shared an interrelated, sometimes turbulent relationship through time. Moreover, the contested transition of the peat-for-horticulture sector, of which BnM is a significant stakeholder, but which also consists of several private operators, would similarly benefit from an approach like the one employed here. Research into the economic, social and environmental outcomes of blanket bog afforestation by Coillte, which is the largest owner of peatlands in the Irish state, would provide compelling data when considering the sustainable use of this valuable land resource. Lastly, a study which incorporated peat worker perspectives into the future of the cutaway bogs would be valuable. This could employ the Participant Action Research method where an academic worked directly with peat employees to develop a model of just transition for the future.

PART IV: REFERENCES AND APPENDICES

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APPENDIX

Appendix 1 - The impact of Covid-19 on the present study

Phase	Formal interactions	Site visits	Scheduled for	Conducted
1	12	4	Summer 2019	Summer 2019
2	7	2	Autumn 2019	Autumn 2019
3	13 (2 in March, 11 in July)	8	Spring and Summer 2020	Began Spring 2020 (2 interviews); postponed due to National Lockdown 1. Recommenced July 2020 (11 interviews); postponed August 2020 due to 'Midlands Lockdown' (Offaly, Kildare, Laois).
4	3	2	N/A	July 2021

Appendix 2 - Participant information form



Trinity College Dublin
Coláiste na Tríonóide, Baile Átha Cliath
The University of Dublin

Participant Information Form

School of Natural Sciences, Trinity College Dublin

1. Title of study: Sustainable bogs: Challenges in transition

2. Details:

Researcher: Jamie Rohu. Supervised by Dr. Patrick Bresnihan

Contact: rohu@tcd.ie

Postal address: Department of Geography, Museum Building, Trinity College Dublin, Dublin 2.

3. Introduction:

The research will investigate the application of *Just Transition*, an emerging concept in climate justice discourse, in an Irish context, drawing on the closure of Bord na Móna bogs as a case study.

Bord na Móna will cease industrial extraction of peat for energy generation by 2028. Employing 2200 people (1600 permanent, 600 seasonal), with a similar number indirectly employed, there is scope for considerable economic hardship in areas dependent on peat harvesting. The Green Party and trade union organisations argue that a *Just Transition* to more sustainable activities is required. What does this mean in practice?

The research will focus on peat production in the midlands of Ireland. It will ask stakeholders such as peat workers, their families, local business owners and community leaders how they envisage a fair transition of the bogs from industrial extraction to sustainable utilisation. The research will seek to understand how these people relate to the bogs, their hopes and fears for the future, and the measures they believe should be put in place to protect both their livelihoods and the environment in which they reside. These perspectives will be compared to those offered by decision makers, such as Bord na Móna managers, trade unionists, politicians and senior civil servants.

4. Procedures:

Interviews will take approximately one hour.

Data collected from workers, their families, small business owners and community members will be anonymized where requested. Those representing an organisation or in an official office or decision-making capacity will be named.

5. Terms and conditions of participation

You have volunteered to participate in this study. You may quit at any time. Your identity will remain confidential. Your name will not be published and will not be disclosed to anyone outside the study. You understand that the researcher may stop your participation in the study at any time without your consent. The study you are participating in has been approved by Trinity College's School of Natural Sciences Research Ethics Committee. You are entitled under [the Freedom of Information Act 2014](#) to access your own data. Research results will be shared with participants and the community in which they reside prior to publication. You can get more information or answers to your questions about the study, your participation in the study, and your rights, from Jamie Rohu, who can be emailed at rohu@tcd.ie

Appendix 3 - Participant informed consent form



Trinity College Dublin
Coláiste na Tríonóide, Baile Átha Cliath
The University of Dublin

Informed Consent Form

School of Natural Sciences, Department of Geography, Trinity College Dublin

Title of research study: Sustainable bogs: Challenges in transition

Participant consent

1. I agree to participate in this research project and be included in any of its research outputs
2. I agree to our conversation being recorded for the purpose of the project
3. I wish to:
 - remain anonymous / be identified by title only / be identified by name and title for any data used in publications or presentations associated with the project
 - review a copy of my statements prior to their publication by the project
4. I acknowledge and understand that:
 - a) my participation is voluntary, and that I am free to withdraw from the project at any time and to withdraw any unprocessed/unpublished data previously supplied
 - b) the privacy of the personal information I provide will be safeguarded and only disclosed where I have consented to the disclosure or as required by law
 - c) the researcher will keep the research data secure and protected during and after completion of the study

Name (please print) _____

Signature _____ Date ____ / ____ / ____

Signature of Researcher _____

Participants with literacy difficulties:

I have witnessed the accurate reading of the consent form to the potential participant, and the individual has had the opportunity to ask questions. I confirm that the individual has given consent freely and understands that they have the right to refuse or withdraw from the study at any time.

Print name of witness: _____

Signature of witness: _____

Date (Day/month/year) _____

Thumbprint of participant:

Appendix 4 - Sample questionnaire

Sustainable bogs: Challenges in transition

Jamie Rohu, Trinity College Dublin

PhD research questions

1. Why is Bord na Móna ceasing extraction of peat from its bogs?
2. What will be the socio-economic impact on Bord na Móna workers and wider communities dependent on the peat industry once production ends? How will the effects be mitigated against?
3. What should be done with the Bord na Móna bogs once extraction ends?
4. What lessons can be learned from prominent international examples of Just Transition when considering these issues?

Questions for [REDACTED]

1. Did you save turf as a child/young adult?
2. How long have your family cut turf?
3. In the 1980s, Bord na Móna drained Clara bog in order to prepare it for peat production. How did the community react?
4. Clara Bog was designated as a Special Area of Conservation under the Habitats Directive. How did the community react to this? What did you think about this at the time?
5. How did you come to represent turf-cutters at Clara bog?

6. A derogation was put in place on some bogs – was that applied to Clara bog?
7. How were you and other turf-cutter accommodated?
8. How might the State have better handled interactions with turf-cutters?
9. In the years following the protection of Clara bog, how have you come to understand and use it?
10. How has the community of Clara been affected by the designation of Clara bogs as a Special Area of Conservation?
11. Have you or any of your family worked for Bord na Móna? How do you personally relate to the company?
12. Why do you think Bord na Móna is ending peat extraction?
13. What future do you envisage for Ireland's cutaway bog landscape now that Bord na Móna has ended production? What would you like to see happen this land resource?
14. What do bogs mean to you? What do they signify?

END