

## **Appendix 1.3 Historical Overview of Bord na Móna's Activities**

# Brief History of Bord na Móna and Bog Development

Since the beginning of the nineteenth century, interest grew in the possibility of developing Irish peatlands on an organised commercial basis and many attempts to do so were made by private entrepreneurs and landowners. However, it seemed that the policy of the Irish Department of Agriculture and the Board of Trade was to make agriculture Ireland's only industry and to discourage the development of peat fuel because of possible competition with British coal. In the late 19<sup>th</sup> century and early 20<sup>th</sup> century the emphasis changed to encouraging the development of Irish peatlands for fuel and improving the quality of turf as a fuel.

In the early 1930s, the Government had made electoral promises to develop Ireland's bogs. A scheme for the expansion of turf production was developed with the objective to stimulate private turf production, establish standards for density and moisture content, fix prices and organise distribution.

In 1934, the Turf Development Board was set up with the task of peatland development. Following visits to Russia and Germany by a Government delegation in 1935, proposals were agreed by the government for bog mechanisation, which would be based on the German model.

In 1936, the Turf (Use and Development) Act was passed by the Dáil. Among its most important provisions was one which gave the Minister power to acquire land required for the Boards operations by compulsory purchase under Section 22(1). In 1936 the Turf Development Board took over Turraun Bog in County Offaly and purchased large bogs at Clonsast, County Laois and Lyrecrumpane in County Kerry. The latter bogs were drained and developed for use with German excavating machines known as 'Baggers'. Also, in 1936 a briquette factory at Lullymore, Co. Kildare commenced production of peat briquettes, which were initially allocated to priority industries and the railway system.

Perhaps the greatest effort to utilise the natural resource of peat was made during the 2<sup>nd</sup> World War when coal supplies from the U.K dried up. It was up to the bogs of Ireland to provide almost the entire fuel needs of the country. The experience during the war re-enforced the Irish State's commitment to developing the country's bogs and in 1944 the Turf Development Board was asked to devise and submit a comprehensive programme to develop the nations peat resources on an industrial scale.

The task of peatland development evolved through several progressive stages resulting in the statutory authority, Bord na Móna being set up in 1946. It was set up under the Turf Development Act 1946 with a mandate to '*Develop the Nations Peat Resources*'. The functions of Bord na Móna as set out under Section 17(1) in that Act are:

- To produce and market turf and turf products;
- To foster the production and use of turf and turf products;

- To acquire bogs and other lands;
- To manage, develop and work bogs and other lands vested in the board.

Since its establishment, Bord na Móna has acquired and developed approximately 88,000 hectares of bogland which, in turn, has supported whole communities primarily in the Irish midlands. When Bord na Móna was established in 1946, the motivation for its establishment was equally social as it was economic. A strategic energy supply could be guaranteed, and, in the process, industrial employment could be given so that people could be kept at home, thus avoiding emigration, or rural depopulation.

## **1.1 The First Development Programme**

The development programme that was undertaken from 1946 was known as the First Post War Plan, or the First Development Programme. In 1946, Bord na Móna had a workforce of 5,138 and a number of bogs were in development and/or production. The First Development provided for two power stations, the development of twenty-four bogs to produce over a million tonnes of sod-peat per annum and the building of a moss peat litter factory in Kilberry, Co. Kildare. The country's first peat (turf) fired power station was opened by the Electricity Supply Board (ESB) in Portarlinton, Co. Laois in April, 1950. Agreement was also reached with the ESB for the construction of a second power generating plant at Allenwood, Co. Kildare.

During the First Development, Bord na Móna, in addition to draining and developing bogs, constructed and purchased hostels for their workers. Workshops, offices and houses (for managerial and supervisory staff) were constructed. New light industrial rail and associated structures, such as bridges and level crossings were also constructed. A new, central stores and an experimental station was also established in Newbridge, Co. Kildare.

## **1.2 The Second Development Programme**

The Turf Development Act 1950, which came into operation on 26th July 1950 authorised the extension of Bord na Móna's activities. With the passing of the 1950 Act saw the initiation of the Second Development Programme. The Act contained provisions for the expansion of activity that would bring capacity up to two million tonnes of machine sod turf per annum and plans for four additional power stations. As well as that, under Section 5(1), it gave Bord na Móna the authority to construct housing for the permanent workforce. Nine schemes comprising a total of 582 houses were submitted to the Minister of Industry and Commerce for approval and site development works commenced in 1951.

Estate Name	County	No. of houses
Kilcormac	Offaly	104
Bracknagh	Offaly	50
Derrygreenagh Park, RochfortBridge	Westmeath	100
Coill Dubh	Kildare	160
Cloontuskert	Roscommon	70
Derraghan	Longford	22
Derryarogue	Longford	64
Mullenmore North	Mayo	12
Erris Road Lecarrow	Mayo	8
One off Staff Housing	Mayo	4
One off Staff Housing	Offaly	21
One off Staff Housing	Meath	1
One off Staff Housing	Westmeath	7
One off Staff Housing	Roscommon	3
One off Staff Housing	Galway	2
One off Staff Housing	Kildare	8
One off Staff Housing	Tipperary	2
<b>Total Houses Constructed</b>		<b>638</b>

*Table 1: Housing Constructed by Bord na Móna*

In addition to the discussions which took place with the ESB regarding the extended use of turf for electricity generation, the merits of milled peat as a fuel for power station boilers were also put forward. In 1951, Bord na Móna also commenced delivering turf to the ESBs new generating station at Allenwood, Co. Kildare. Reports were produced which identified suitable bogs for development to meet the ESBs programme for additional steam stations. It was decided that milled peat instead of sod peat would be used at the proposed new ESB plants.

By 1953, Bord na Móna reached the final stages of the First Development Programme and at the end of that year, there were 470 houses either completed, or in the course of construction. At the end of 1954, a tender was accepted for the erection of a scheme of one hundred houses at Rochfortbridge, Co. Westmeath. The scheme was constructed to house workers employed at the Derrygreenagh Works and it brought the total number of houses completed, or in the course of construction to 566.

In 1955, milled peat production commenced in the Boora group of bogs. The Boora Group was developed to supply peat to the planned new ESB power station at Ferbane, Co. Offaly. The ESB also had plans to construct another peat fired plant at Lanesboro, Co. Longford and major development works continued in the Mountdillon group of bogs to supply the Lanesboro ESB plant. As part of the development of the Mountdillon Bogs, contracts were also signed for the construction of a multi-span, steel railway bridge over the River Shannon, which would link bogs on the Roscommon side of the Shannon to the power station at Lanesboro, Co. Longford.

The delivery of milled peat to the Ferbane Power Station commenced in 1957 and following a decision to construct two new briquette factories, construction commenced on the Derrinlough Briquette Factory near Birr, Co. Offaly. The Derrinlough Plant would also be supplied by the Boora group of bogs. A site was also purchased for a second facility at Croghan near Rhode, Co. Offaly. Full scale production of peat briquettes commenced in Derrinlough in 1960 and production commenced at Croghan Briquette Factory in 1961/62. Supply of milled peat to the Croghan factory would be from the Derrygreenagh group of bogs. In 1959, Bord na Móna was notified by the ESB that the capacity of a proposed peat burning power station at Rhode, Co. Offaly was revised from 40MW to 80MW and, therefore, preparations were put in hands for the development of additional bog areas in the Derrygreenagh group of bogs to meet the increase in the station's requirements from 350,000 tonnes to 700,000 tonnes per annum.

During the 1950s and 60s, Bord na Móna also developed and expanded its horticultural business through a range of new moss peat products and in 1956, drainage and development works commenced at Allen Bog in Co. Kildare for the production of moss peat. Development works on the Cuil na Móna group of bogs also commenced in the early 1960s and in 1965 construction works commenced on a new moss peat factory at Cuil na Móna to produce 400,000 bales of moss peat per annum. This would be in addition to its existing horticultural factory at Kilberry, Co. Kildare, which was already producing approximately 200,000 bales of moss peat per annum.

In 1958, Bord na Móna was notified of a decision by the ESB to proceed with the erection of a milled peat power station at Bellacorrick, Co. Mayo. The decision enabled Bord na Móna to continue on a definite basis with the development of the Oweninny group of bogs, from which 320,000 tonnes of milled peat would be supplied annually to the new station commencing in 1963.

During the 1950's and into the early 1960s, drainage and development works continued in the Blackwater group of bogs in Co. Offaly in preparation for peat production to supply a new power station in Shannonbridge, Co. Offaly, which was due to commence operation in late 1964. In the late 60s, due to a decision made by the ESB to add another 40MW (80MW total) to the station at Shannonbridge, Bord na Móna commenced development works on the Galway side of the River Shannon (Garryduff Group) and a concrete rail bridge was constructed spanning the River Shannon to link the Galway bogs to the power plant at Shannonbridge.

The Second Development Programme saw a significant increase in Bord na Móna's operations and by the mid to late 1960s, Bord na Móna were supplying seven ESB power stations.

Station	Location	Fuel	Generating Capacity
Shannonbridge	County Offaly	Milled Peat	125MW
Ferbane	County Offaly	Milled Peat	90MW
Rhode	County Offaly	Milled Peat	80MW
Lanesboro	County Longford	Milled Peat	85MW
Bellacorick	County Mayo	Milled Peat	40MW
Allenwood	County Kildare	Turf	
Portarlington	County Laois	Turf	

*Table 2: Power Stations Supplied by Bord na Móna*

The company were also operating three briquette factories and two horticultural peat factories and the bog footprint for the production of energy, fuel and horticultural peat had increased significantly.

### 1.3 The Third Development Programme

The scale of Bord na Móna's operations changed again during the oil crisis of the 1970s. The importance of peat as an indigenous resource led to the re-evaluation of the role and importance of Bord na Móna. As a direct result of peat being cheaper than competing fuels during that period and in the light of hardships imposed, Bord na Móna, at the request of the government, undertook a series of investments. In August 1975, The Turf Development Act was passed, which authorised the company's capital borrowings to be increased from £28m to £60m. This Act gave legislative effect to the government's approval of Bord na Móna's Third Development Programme. Under the Third Development Programme, approximately 30,000 additional hectares of land was purchased for the purposes of increasing Bord na Móna's operations. The programme involved a total investment of £164m and it included plans for an additional 90MW of peat generating capacity (45MW at Shannonbridge and 45MW at Lanesboro) and plans to construct two new briquette factories.

Major bog drainage and development work was undertaken and new offices and workshops were constructed at a number of locations. By 1980, drainage and development works had proceeded on approximately 17,000 hectares of the 30,000 hectares purchased. In the early eighties, Bord na Móna was an important part of the social and economic scene in Ireland. Approximately 7,000 workers were employed at peak and the company had a captive market for its peat for electricity and with its initial plans to build two further briquette factories, demand was obviously high.

Major civil works were carried out during the early 1980s in extending the railway network and associated infrastructure, such as railway underpasses, bridges and level crossings. Much of the work carried out was associated with the extension of its existing operations and the expansion of horticultural peat production. Some examples of the expansion in existing operations included the construction of railway bridges over the Brosna River and the Grand Canal in Co. Offaly to provide a link between the Lemonaghan group of bogs and the Boora

group, a new rail bridge over the River Suck to extend the footprint beyond the Garryduff bogs in Co. Galway and a new railway bridge over the Figile River to link the Ballydermot and Derrygreenagh group of bogs. In relation to the expansion of its horticultural business, Bord na Móna constructed new horticultural peat out-loading facilities at Monettia Bog, Co. Laois, Giltown, Co. Kildare and Kinnegad, Co. Kildare. New bulk loading facilities for moss peat at Ballivor, Co. Meath were also constructed.

In 1986, as part of the concluding phases of the Third Development programme an additional 666 hectares of bog was acquired by Bord na Móna, which brought the total land in Bord na Móna's ownership to 88,763 hectares. Also, by the end of the Third Development Programme, Bord na Móna had established a total of twenty-three works locations around the country.

While the programme resulted in the increased utilisation of peat, it failed financially, as it was predicted on oil prices remaining high, which did not happen. During the 1980's, Bord na Móna found itself operating in a changing environment. For years gone by, peat had been Ireland's only utilised indigenous resource. However, once the newly discovered natural gas resource from the coast of Kinsale in Co. Cork came on stream in 1979, this was to have a major impact on Bord na Móna. A lot of Bord na Móna's commercial and domestic consumers in the major cities converted to natural gas. As well as that, people began to change over to using more efficient fuels for domestic purposes, such as oil and natural gas. Another major impact on Bord na Móna was the Private Turf Development Act, 1981 to encourage the private development of smaller bogs. The impact of the act was to bring onto the market an amount of peat for domestic consumption equivalent to twice the amount of peat briquettes produced by Bord na Móna (see Table 4). For this reason, a decision was taken to construct only one new briquette factory. The new facility was constructed at Littleton, Co. Tipperary.

Year	Tonnage of Turf Produced	Tonnage of Briquettes Produced
1981	350,000	336,179
1982	350,000	354,112
1983	463,700	442,564
1984	680,279	417,960
1985	607,094	492,426
1986	663,840	460,207
1987	1,037,000	505,000
1988	1,255,600	363,000
1989	1,389,600	355,000
1990	1,410,000	403,000

*Table 4: Private Turf Production Vs Briquette Production*

In addition to the above, the use of bogs for development purposes was questioned by conservationists, particularly in the U.K, the main export market for the company's horticultural products.

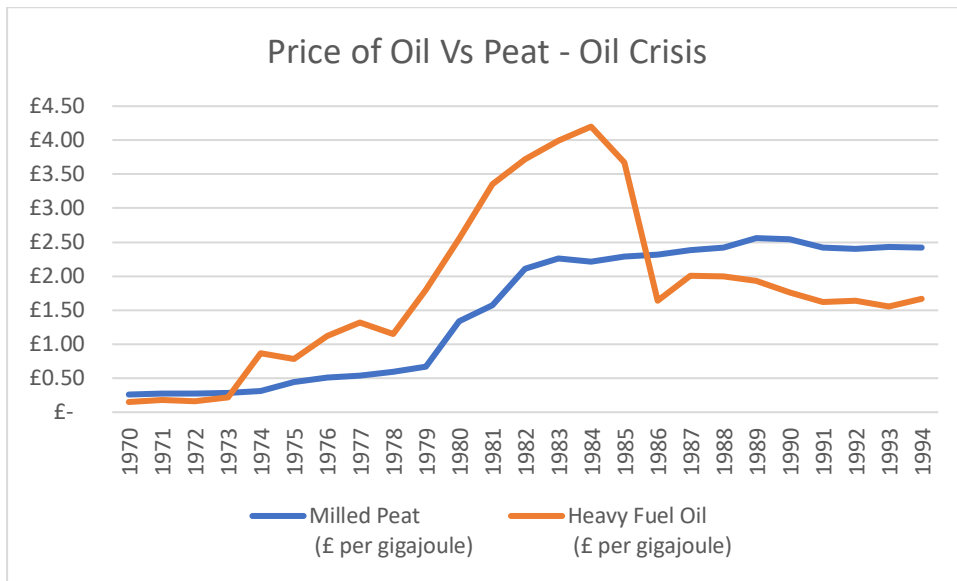


Figure 1: Oil Price Vs Price of Peat During the Oil Crisis

#### 1.4 After the Third Development Programme

By the late 1980s, Bord na Móna were high cost producers of what was already a high cost product and with the drop in energy prices, the end product was further and further out of line. Adding to this, bad weather conditions which resulted in some poor production seasons, particularly in 1985 and 1986 and a balance sheet which had not been restructured to take account of the expansion of the seventies, Bord na Móna found themselves in a serious situation. With the milled peat harvest yielding 39% of target in 1985 and the summer of 1986 being just as severe, Bord na Móna reluctantly resolved at the end of August 1986 to lay off 2,300 employees after all other economic measures had been exhausted. However, a late autumn spell of fine weather provided an unexpected opportunity to extend the harvesting season and an unprecedented 45% of the annual target was won during the autumn months, which brought the years total harvest to 78% of target. This was considered a remarkable achievement which, according to the company Chairman of the day was due entirely to the determination of all employees to save the company. As a result of the improved financial forecasts it was decided to proceed with only 350 lay-offs and these were achieved largely on a voluntary basis.

The impact of two consecutive bad summers on Bord na Móna's ability to harvest its feedstock raised some fundamental questions for the company, one of which related to its capital structure. With the exception of retained earnings, all capital was borrowed on the commercial markets and irrespective of the weather conditions in any particular year, or adverse movements in world energy prices there was an ongoing obligation on Bord na Móna to service those borrowings. Such charges were unavoidable and, therefore, the only recourse for Bord na Móna was to defer capital expenditure, postpone essential maintenance, abandon development projects and engage in the lay-off of permanent skilled staff. Repeating such measures too frequently would only damage the company's capacity to sustain itself in the long term and would be a self-defeating course of action. If there was anything positive to be taken from those difficult years, it was that there was a renewed



realisation of Bord na Móna's national and regional importance. The company had an average employment of 4,688 during 1986/87, with a peak employment of 6,100 during the production season, which placed it among the country's largest commercial employers. The importance of such levels of employment were largely due to its regional concentration in the Midlands and also in the cost per job created, which was below the norm for industries in Ireland at that time. However, in order to remain viable and continue to grow and develop the country's natural peat resource, the company decided to conduct a major review of all aspects of its operations. When Bord na Móna began to address the problem, the changes that took place were severe.

To reduce the high production costs the company embarked on a rationalisation programme from 1989 to 1993 and a series of initiatives were designed to reduce costs and increase productivity in all areas of company activity. For the financial year 1988/89, of a total operating cost of £100m, staff costs accounted for £59.1m. The main changes that took place entailed substantial reductions in the numbers employed and the introduction of work teams, or, Autonomous Units as they were known. This was a system, where-by, workers were paid by results. It allowed teams to be rewarded on the basis of output and efficiency and the quality of the peat they produced. The new system proved very successful for Bord na Móna and the new work systems coupled with advances in machinery and production technology resulted in increases in productivity. However, approximately 3,500 jobs were lost in the process. As a principle element in the company's drive to focus itself on the market and the customer, a key part of the change initiated was the divisionalisation of the company. In April 1989, the Board confirmed its decision to divide Bord na Móna into separate divisions, each of which would be self sufficient and autonomous. Initially, three divisions were established:

- Peat Energy (production and sale of milled peat);
- Horticultural Division (production and sale of moss peat and composts and to develop the horticultural and garden market business);
- Solid Fuels Division (production and sale of briquettes and sod turf and to develop domestic fuels sales generally)

A fourth division was added in May 1990, which was the Environmental Products Division.

## **1.5 Securing the Continued Use of Peat in Irelands Energy Mix**

In 1992 a pre-feasibility study was completed for the construction of a 120MW peat-fired station based on fluidised bed technology. The existing power plants were old technology and a plant with fluidised bed technology could operate at higher efficiencies than the existing ESB plants. In June 1993, a full feasibility study for the proposed new plant, which was known as Europeat 1 (now Edenderry Power Limited) and was to be located near Edenderry in the East Midlands, was submitted to the Minister for Transport, Energy and Communications. Around the same time, Bord na Móna made proposals to the same Department aimed at charging the Energy-Related price for milled peat and putting in place a mechanism to retire a substantial portion of Bord na Móna's "dead weight" debt over a fixed period. Despite rationalisation and a return to profitability, the debt remained on the books of Bord na Móna with the result that the company had a negative net worth.

In January 1994, the ESB announced the closure of its Allenwood Power Plant, which would have serious implications for workers at the Ballydermot group of bogs. However, in April 1995, an agreement was reached with the European Commission on the provision of financial assistance for the proposed Europeat 1 power plant. With plans to construct a new 120MW plant in the East Midlands, both the Ballydermot and Derrygreenagh group of bogs were to be the primary supply bogs for the plant. Also, on 30th May 1995, the Minister announced that the Government had decided to inject equity into Bord na Móna in three tranches in order to eliminate the portion of Bord na Móna's debt which had been identified as a "Sunk Cost" debt arising from Energy Policy decisions taken in the 1970's. The decision to inject these funds was conditional on a commensurate reduction in the price of milled peat sold to the ESB. It reduced the price of milled peat sold to the ESB from around £19 per tonne to £13 per tonne. The reduction in the price brought an end to the previous indirect method of servicing the unsustainable debt and involved savings of approximately £14m to the ESB.

The transaction had two effects on Bord na Móna. Firstly, by restructuring its balance sheet it would enable Bord na Móna to look at future development projects on a conventional basis. Secondly, by making peat competitive, it would strengthen the commercial ethos that Bord na Móna had already developed. The equity injection did not put any additional money at Bord na Móna's disposal as it was balanced by a reduction in the price of peat to the ESB and by a major reduction in Government guarantees on borrowings.

In 1996 the company decided to begin the major redevelopment works required for Europeat 1, which largely consisted of re-developing bogs, mainly in the Ballydermot Group to convert the existing sod peat bogs into milled peat production areas. A major programme of construction also took place for new industrial rail and associated infrastructure. New production machinery was fabricated in-house in Bord na Móna workshops and, in general, the project gave a new lease of life to the Ballydermot and Derrygreenagh Groups. With the redevelopment of the Ballydermot group of bogs for milled peat production came the end of machine won 'Bagger' turf produced by Bord na Móna.

The Turf Development Act, 1990, gave Bord na Móna the power to form subsidiary companies under Section 2(2) and Section 3. However, the most significant piece of legislation to affect Bord na Móna since the 1946 Act, the Turf Development Bill, 1997, took this one step further. The Bill provided for the conversion of Bord na Móna from a statutory corporation to a public limited company. The purpose of the Bill was to ensure that Bord na Móna had the right structure to allow it to develop. It was felt that the company needed flexibility to undertake options, delegate core activities and subsidiaries, the power to enter into joint ventures where appropriate etc. The Bill was designed to give the company such flexibility.

On 30th December 1998, Bord na Móna, the statutory corporation was dissolved and Bord na Móna Plc. (which was incorporated on 3rd December 1998) took over its employees, trade, assets and liabilities.

In 1999, Bord na Móna proposed that the existing peat-fired electricity generating capacity be modernised. At the time, the outlook for the next five years predicted that Ireland would rank second highest in the EU (after Portugal) in its dependency on external sources for primary energy unless indigenous resources such as the Corrib Gas Field were discovered. It was estimated that by the year 2010, Ireland would import 91% of its primary

energy by being dependent on external supplies to the extent of about 90%. Therefore, Bord na Móna proposed that substantial remaining reserves of peat be converted to electricity in the most efficient manner by replacing existing peat-fired electricity generating units with the latest technology for converting peat to electricity. The new technology generated 32% more electricity from every tonne of peat and, thus, produced 32% less CO<sub>2</sub> per MW of electricity. The effect of the initiatives proposed by Bord na Móna would see peat contributing 8% of Irelands electricity by 2010, compared to 5% if the existing, less efficient technology was to remain in use.

In the year 2000 the Ferbane Power Station ceased operation and a 40MW unit at Shannonbridge also went out of commission. In addition to this, Bord na Móna closed its briquette factory at Croghan. The impact of the closures led to redundancies and redeployments, but the need for lay-offs was avoided. The ESB also announced that all of its remaining peat-fired power plants were to close by 2004/05. However, it was government policy that they were to be replaced with new stations which would be located at Shannon Bridge (West Offaly Power-150MW) and Lanesboro (Lough Ree Power – 100MW).

With the new power station at Edenderry becoming operational in 2000 and with plans to construct two more equally efficient plants at Shannonbridge and Lanesboro, the use of peat in Irelands energy mix was to be secured up to 2020.