Pentreclwydau Colliery – Why did the National Coal Board close the Vale of Neath’s ‘hundred-year super pit’ after just over a decade?

Student Dissertation

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Pentreclwydau Colliery – Why did the National Coal Board close the Vale of Neath’s ‘hundred-year super pit’ after just over a decade?

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Introduction

At the northern end of the Vale of Neath, approximately 15 miles north east of Swansea and 12 miles west of Merthyr Tydfil, lie the remains of Pentreclwydau Colliery. Just north of the B4242 between Glynneath and Resolven, the site is now a scheduled monument, consisting of two abandoned winding rooms, a concrete fan house, and two bricked-up drift entrances.¹ This is all that now remains of a colliery that was hailed as the ‘salvation’ of the industry on its ground-breaking in 1954² but closed just thirteen years later as one of the National Coal Board’s most ‘conspicuous failures’.³ This dissertation will seek to trace the history of the colliery from the planning phase, through building and operation, right through to its closure, to examine how and why the pit failed in such a short period of time.

In July 1946 Clement Atlee’s post-war Labour government gained royal assent for The Coal Industry Nationalisation Act, and on 1st January 1947, 958 privately owned collieries passed into public ownership.⁴ The newly formed National Coal Board (NCB) set about reviewing and rationalising coal production across the country and in 1950 they produced A Plan for Coal⁵. This document had a massive impact on the South Wales coalfield, and nowhere was this more significant than in the north-western edge of the area, where the NCB planned to exploit plentiful anthracite reserves. The plan was based on radicalising coal production, by centralising facilities, reducing workforces and establishing master or ‘super pits’ that were

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¹ Anon, Ancient Monument Website available at Pentreclwydau Colliery, Glynneath (Glyn-nedd), Neath Port Talbot (Castell-nedd Port Talbot) [ancientmonuments.uk] [Accessed 31 Mar 2021].
² Anon, ‘Vale woodlands make way for new pit’ Western Mail, 3 June 1954, p.3
⁵ A Plan for Coal (1950), National Coal Board.
to replace smaller, outdated or outmoded sites.⁶

Improved output of the region’s valued, high-quality anthracite was intended to secure the long-term future of mining the Vale of Neath. By replacing older, less economical pits at Glyncastle, Rock, Onllwyn and Seven Sisters and redeploying many of the workers to new or refurbished sites that were designed to be more productive and economically viable, the NCB hoped the valley would contribute strongly to the projected output of coal they estimated it would need to produce throughout the 1960s and beyond.

While this long-term approach sought to provide both stability for the industry and a home for the miners who had seen their own pits closed in favour of these new sites, a succession of issues, some specific, some more general, led to the closure of Pentreclwydau in 1967, a mere ten years after production began, having never come close to achieving any of the NCBs stated aims for the site. The failure of the pit is commonly ascribed to three factors: its geology, its internal culture, and the wider problems in the industry.

_The Fed: History of the South Wales Miners in the Twentieth Century_ by Hywel Francis and David Smith (1980) is the pre-eminent text on modern coal mining in South Wales. Smith and Francis tackle the subject of pit closures from the point of view of industrial relations, and although much of the focus of their work is on the pre-nationalisation era, they do briefly cover the changes in the industry in the 1950s and 1960s and offer very important political context for the time. Ben Curtis’ book _The South Wales Miners; 1964-1985_ (2013) takes a similar socio-political approach, building on Francis and Smith’s work by applying the same level of detail and research to the period 1960-1990. Curtis discusses nationalisation and the NCB’s 1950 _Plan for Coal_ which sets out the general principle of modernisation and

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which introduces the idea of super-pits in much greater detail. Writing in 1980, Smith and Francis are broadly supportive of the super-pit programme in an era that otherwise ‘butchered’ the industry; Curtis, writing two decades later, argues that Pentreclwydau was the policy’s most notable failure, a fact that he primarily attributes to cultural difficulties at the site. Curtis points to the melting-pot of workers once of Rock, Glyncastle and Rhigos struggling to organise as a cohesive workforce and concludes that ‘the NCB’s failure to heed miners’ grievances [had] serious implications for its whole strategy for the coalfield’. Another useful text on the implementation of the Plan for Coal is Kim Howells 1979 dissertation paper, A View from Below: Tradition, Experience and Nationalism in the South Wales Coalfield 1937-1957. Howells’ approach is more consciously people-focussed and is very much in the tradition of history from below, looking at the impact of the industrial changes, modernisation, closures, and industrial action from the perspective of the mineworkers themselves. While there is significant crossover in all three sources, Howells leans towards a less political and more sociological approach. By contrast the Welsh Coal Mines website offers a totally different perspective. The site’s entry on Pentreclwydau contains a couple of brief, tantalising statements that suggest that there were significant geological faults that severely hampered all attempts to work the site. Academic studies on this issue are very technical and consider matters from a geological and geographical perspective, such as Malcolm Blandford’s thesis, The Geology of Part of the North Crop of the South Wales Coalfield (1986), which examines in significant detail, the location and

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10 Anon, Welsh Coal Mines website available at https://www.welshcoalmines.co.uk/Photo.htm [Accessed 24 Apr 2021].
geological composition of the Neath Valley and makes many important observations about the land in and around Pentreclwydau. While this is not a historical source, any reasoning for the closure of the colliery must consider, at least at a basic level, the geological challenges and issues that existed at the site and coalface itself.

Ieuan L Griffiths’ 1962 article ‘The New Welsh Anthracite Industry’ offers a different viewpoint of the super pit policy - specifically in the anthracite belt - with a partial focus on Pentreclwydau. Griffiths’ approach is geographical in nature, detailing the issues and events as they appeared at the time, from the outside looking in, and consequently, he makes far fewer direct references to industrial relations. However, his combined focus on the geology and the effects of absenteeism and transferring of staff overlaps with the other sources and offers a contemporaneous perspective.

In contrast to these sources, this dissertation will focus in a much more specific way on a single pit, in a single location over a period of fifteen years. It will look to balance these approaches, the political and social approach of Curtis and Howells with the geographical and geological focus of Blandford and Griffiths to consider the contributing factors in the failure of the pit. Chapter One will focus on the planning and geology of Pentreclwydau, examining the reasons behind its conception, its siting, planning and construction and the how the geological problems experienced during operation contributed to the pit’s demise. Chapter Two will focus on the problems and challenges that the pit’s management and workforce faced during its years of operation, looking at problems with merged workforces, manpower drift, union politics and the wider effects of the closure within the industry and

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community. The view from within the pit has been difficult to reconstruct and relies heavily on the oral testimony of two former miners speaking some fifteen years later. Clearly, these recollections are opinion, but they will be augmented and supported from other sources where possible. Additional testimonies have been identified which could further understanding of life in the pit, however these were unfortunately inaccessible at the time of writing. Also, while wider political and policy issues will be referenced to provide background and context, this dissertation will not seek to examine these in detail.

While both Curtis and Smith and Francis have explored the industrial relations in the south Wales Coalfield and considered many of the wider pressures on the industry in the 1960s, these theories have never been applied specifically to Pentreclwydau colliery. And while Blandford describes in detail the geological issues beneath the surface of the Vale of Neath, he makes little or no reference to the effect that these had from a historical perspective on the mining industry in the 1960s. It seems therefore a worthwhile and manageable approach to drill down into the detail of this single pit and consider its wider significance by combining these tangentially linked factors to produce a holistic and unique study of the history of Pentreclwydau Colliery in the Vale of Neath.
Chapter One – Planning and Geology

On the 2nd June 1954, Mr G A Watson, general manager of the NCB’s South Western Division Area No.9 ceremonially felled the first of an estimated 1000 trees in a steep ravine on the banks of the Clwydau Brook. Tucked away in the forest behind the hamlet of Pentreclwydau this was the proposed site of the new super-pit for the Vale of Neath.\(^\text{13}\) In keeping with the nature of the Coal Board’s rationalisation and consolidation policy, Mr Watson explained that the nearby sites at Rock and Aberpergwm were no more than six years from exhaustion,\(^\text{14}\) and that the planned drift would utilise modern mining techniques and mechanisation to extract 1900 tonnes per day\(^\text{15}\) of previously inaccessible anthracite and become the long-term ‘salvation’ of mining in the area.\(^\text{16}\)

Welsh coal had been key to powering Britain’s Industrial Revolution, but in the immediate post-war era, the country was on the brink of a technological revolution that presented fresh challenges for this once dominant industry. In response, the NCB undertook a root and branch review of UK coal mining and in 1950 produced *A Plan for Coal*\(^\text{17}\); a blueprint for improvement and rationalisation for an industry facing the challenge of cheaper oil and gas, and the growing popularity of electricity in the home and workplace. One of the key tenets of the plan was to exploit the estimated four billion tonnes of anthracite – the highest grade

\(^{13}\) Anon, ‘Vale woodlands make way for new pit’ *Western Mail*, 3 June 1954, p.3.

\(^{14}\) Anon, ‘New £1,000,000 pit will be Neath Valley’s salvation’ *Neath Guardian*, 4 June 1954, p.1.


\(^{16}\) *Neath Guardian*, ‘New £1,000,000 pit will be Neath Valley’s salvation’ p.1.

\(^{17}\) *A Plan for Coal* (1950), National Coal Board.
of coal - known to exist within south Wales coalfield. The NCB projected to spend £27 million to increase south Wales anthracite production from 2.9 million tonnes per year to 6 million tonnes, employing an additional three thousand workers. Unlike the dusty bituminous steam coal of the Rhondda Valley, anthracite is a near smokeless fuel. Virtually clean to the touch, it ‘burns slowly with little flame and considerable heat’. With the development and increased use of diesel engines in all forms of transport, the demand for steam coal was in decline. Supplying power stations and domestic customers with the highest grades of clean, economical anthracite was vital for the future of the industry.

Anthracite mining in the western edge of the south Wales coalfield has a rich history, providing for generations, the high-grade fuel required for iron and steel production, yet this chain of pits always stood somehow apart from the main, high-output steam coal areas of the Rhondda. More geographically remote, less diverse, and with a culture of their own, the mines of south Wales produced over 86% of the national total anthracite extracted between 1921 and 1958. Anthracite pits were generally smaller, more traditional, and less mechanised than the rest of the coalfield, but this was more an issue of pragmatism than of neglect or underinvestment. The private companies, such as Powell Duffryn and Amalgamated Anthracite who had prospected the area for many years, understood well what journalist W.E Hall described; “anthracite mining is difficult, because the greater heat and pressure that made the stuff in the first place have also produced difficult seams”.

Oppressive conditions, folded seams and excessive faulting had limited investment to the

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19 *The Times*, ‘635m investment plan for the coal industry’, p3.
coal that was accessible and easier to win.\footnote{22} Also, the sheer mineral hardness of anthracite coals had restricted the application of modern mechanised systems, and many mines had become dilapidated, or worked ‘past their limits’ by traditional means.\footnote{23} The NCB’s conclusion demanded that new sites be identified, new modern, mechanised pits sunk, and the workforce concentrated in these locations.\footnote{24}

NCB experts identified an area with an estimated fifty million tonnes of workable anthracite coal in seven seams, under the Rheola Forest between Aberpergwm and Ynsarwed collieries.\footnote{25} However, there were difficulties in exploiting this part of the coalfield. Firstly, there were several known geological faults that had previously deterred private prospectors. Geographer Ieuan Griffiths, writing in 1962, described the geology and topography of the area as ‘generally adverse’\footnote{26}. While faulted ground – areas of geological slip which vertically displace mineral seams – was common across the coalfield, the area under the Rheola forest was known to be particularly badly affected. While riddled with minor faults, the area lies at the intersection of two major faults.\footnote{27} The Vale of Neath disturbance as the name suggests runs beneath the River Neath and consists glacial deposits up to sixty metres thick that made the sinking of mines impossible.\footnote{28} At an almost right angle, the Pentreclwydau or Pwllau Bach fault lies to the west of Glynneath and Aberpergwm. In his 1986 thesis, geologist Malcolm Blandford explains how the Pentreclwydau fault (mapped by Owen in 1953) is one of a small number of complex faults that both ‘dip’ and a ‘strike’ at different points. This means that the direction of the fault

\footnote{22} WE Hall, “‘Seven’ is dead but the Valley prospers” \textit{Birmingham Daily Post}, 8 Sep 1964 p8.  
\footnote{24} Griffiths, ‘The New Welsh Anthracite Industry’ p389.  
\footnote{26} Griffiths, ‘The New Welsh Anthracite Industry’ p389.  
\footnote{27} Blandford, \textit{The geology of part of the north crop of the South Wales Coalfield,}., p14.  
\footnote{28} Blandford, \textit{The geology of part of the north crop of the South Wales Coalfield,} p164.
twists and changes along its length displacing the seams upwards in the strike area then downwards in the dip creating folds and twists in the coal beds. The area is also bifurcated by the Pennant Scarp, a thick seam of sandstone which to the south required deeper shafts or drifts than had previously been considered economically viable. This summary is an oversimplification of the problems beneath the Rheola Forest, but nonetheless it highlights that the area is geologically complex and that the faults were known and understood at the time of planning.

The NCB’s extensive surveying of the Rheola forest considered locations other than Pentreclwydau, but none were found suitable. The Clwydau Brook site was the only one considered viable but even then, it could not house all the necessary facilities. In his account of the establishing works, site manager E.J.H (Herman) Nicholas explained how Pentreclwydau would have to be connected by a mile long light railway to Aberpergwm. With the mine earmarked for closure, the NCB envisaged retaining the overground facilities at Aberpergwm as a coal treatment plant for both Pentreclwydau and Blaengwrach, effectively a hub, through which coal was treated and transported onwards, and from which the workers could travel to the drifts and back to their baths and welfare facilities.

There were clear benefits of the site’s proximity to Aberpergwm. If sited further west, it would have been more complex and costly to link the new pit to the local transport network, making it less accessible to the local workforce. Sharing facilities with Aberpergwm may also have kept costs down. Griffiths estimated that by 1962, set up costs for Pentreclwydau ran at

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29 Blandford, *The geology of part of the north crop of the South Wales Coalfield*, p. p143-144.
31 Nicholas, *Drifting at Pentreclwydau*, p57.
32 Woodhouse, ‘Giant pits planned for Wales’ *Western Mail*, 21st April 1958, p1.
about £2.2 million,\textsuperscript{33} comparing favourably with Super-pits at Abernant (£10.5 million) and Cynheidre (£14 million).\textsuperscript{34} While the proximity to an established pit had benefits, the chosen location also presented significant problems. While the building of access roads and connection to the electricity grid was routine, the culverting of the Clwydau Brook to create a solid base for the pit site, while allowing the tributary to flow unabated beneath was a specialist task. But the greatest difficulty lay in very steep one in three gradient, at which the elevated site required the drift to be sunk to reach the seams. This was an almost unprecedented gradient in the coalfield and certainly a unique challenge for the contractors George Wimpey and Company. In his notes, Nicholas identifies and documents the issues that they encountered for the benefit of future developments and presented these at a public meeting of the South Wales Institute of Engineers. The feedback from the questions asked was genuinely positive, and Nicholas was strongly commended by his fellow engineers for overcoming the immense difficulties of the gradient.\textsuperscript{35}

Of course, Nicholas would have prepared his paper in the best possible light and the true extent of the difficulties may never be known, but it is still historically significant that we have such a comprehensive record of the process. According to Nicholas, for the first six months, progress on the drift was very slow, averaging ten yards per week. This was due in most part to problems with removing debris from the tunnel at such a steep gradient. The worst of these issues had been overcome by early 1955 and the rest of the drift was sunk at a peak rate of twenty-four yards per week, (averaging twenty yards).\textsuperscript{36} By contrast, further along the valley, on lower ground, the new drift sunk at Blaengwrach (on the site of

\textsuperscript{33} Approximately £42 million in 2021.
\textsuperscript{34} Griffiths, The New Welsh Anthracite Industry, p394.
\textsuperscript{35} Nicholas, Drifting at Pentrechwydau, p.p75-79.
\textsuperscript{36} Nicholas, Drifting at Pentrechwydau, p71.
Cwmgwrach Colliery) in 1961 at a more traditional, almost level, one in four hundred gradient, averaged a much healthier forty yards per week with a peak of 106 yards for a single week.37

Local newspapers reported on the plans factually, and largely without hyperbole, nonetheless, they seem to have been keen to mirror the NCBs optimism for the site. Headlines like ‘New £1,000,000 pit will be Neath Valley’s salvation’ In the Neath Guardian in June 1954 explained how the pit would be screened from the main Neath-Glynneath Road by a thicket of trees and would utilise machines and techniques that had ‘never been used in the area’.38 In October of the same year, the paper printed the erroneous headline ‘Pentreclwydau Colliery project will produce 40,000 tonnes a year’. In fact, that forty thousand tonne figure was a misprint corrected later in the article – the actual projected output for the mine was 400,000 tonnes per year.39

With drifting and preparation work continuing, the nine-feet seam was reached and Pentreclwydau began producing on a small scale as early as 1958, but in the decade since nationalisation, conditions, both political and technological had changed, and these had an immediate impact on the new mine. The Labour administration who had championed nationalisation and produced the Plan for Coal had been replaced by the Conservatives in 1951, and their energy policy was significantly more dualistic. Their focus was on cheap oil imports, made easier by the completion and opening in 1950 of the Trans-Arabian oil pipeline, which shipped vast quantities of crude oil from deep in the Arabian desert, to the Syrian port of Sidon, on the Mediterranean Sea. While increased domestic uptake of gas may

38 Anon, ‘New £1,000,000 pit will be Neath Valley’s salvation’ p3.
39 Anon, ‘Pentreclwydau Colliery project will produce 40,000 tonnes a year’ Neath Guardian, 15 Oct 1954, p7
have affected coal consumption, its impact on the industry was minimised by the fact that
the methane ‘town’ gas was a natural by-product of the mining industry. Indeed,
Pentreclwydau itself was connected to the mains network in 1961 to help drain gas from the
mines for use in domestic settings. The same, however could not be said of the opening in
1956 of the UK’s first nuclear power station at Windscale. The emergence of cleaner, more
efficiently produced, and potentially cheaper energy sources was a concern for everybody
involved in the coal industry. Whatever the actual combination of factors, the stark truth
was that the demand for coal was falling sharply and production with it, from 228 million
tonnes in 1957 to 195 million tonnes in 1961.

It is also evident from a Cabinet Office memo dated 24th March 1956, that the NCB and
the government had significantly underestimated the cost, time, and complexity of sinking
the necessary new pits to fulfil their commitment to the industry. The memo states explicitly
that ‘...if investment were now broken off, not only would it be impossible to start new
major schemes, but many of those already in progress would have to be abandoned’. An
indication perhaps, of how close development projects such as Pentreclwydau came to
having the plug pulled completely.

Having passed this ‘point of no return’, the machines were brought in, and the site
manned for early production. This included the purchase of a £150,000 Goodman’s
Continuous Miner, the first of its kind to be deployed in the UK. While belt conveyancing had
been in operation at some sites for decades, cutting, hewing, and loading machinery was a

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40 Anon, ‘Large scale project for draining gas from mines’ *Port Talbot Guardian*, 08 Sep 1961, p11.
relatively new development in the industry, first pioneered by private companies in the years leading up to the Second World War. The south Wales coalfield had a reputation for lagging in terms of mechanisation and the anthracite belt especially relied heavily on traditional methods.44 The introduction of the continuous miner, a 32 tonne American-built behemoth set on caterpillar tracks with two rotating cutting arms that tore the coal from the face onto a belt that carried it out to the main conveyors,45 was key to the estimated 1900 tonne daily output target for the pit. Indeed, such was the machine’s prodigious output that the Birmingham Daily Post suggested that new conveyors were designed to keep up with the pace.46 The machine was not placed speculatively into the pit however, having been identified and evaluated by site manager Herman Nicholas during his time studying at the University of Illinois.47

The initial plan was for Pentreclwydau to be working at full capacity by 1959, but an NCB memo dated 14th January 1960 reported they were only producing approximately ten percent of the projected annual output of 400,000 tonnes of coal. The memo states that disturbances in the nine-feet seam would likely delay full production by ‘three of four years.48 While those disturbances were likely to have included smaller faults, the greater problem was reported to be ‘washed out’ faces. A washout is a term for a sudden and unexpected thinning or discontinuation of a coal seam. They are formed by ancient streams or water courses which eroded the mineral deposits allowing them to be backfilled by

44 Curtis The South Wales Miners; 1964-1985 p61.
48 National Archives (NA), Authorisation, and control of capital expenditure: South Western division (Coal 23/163).
sandstone or shale.\textsuperscript{49} These disruptions to the face might only extend to a couple of yards, or they could stretch on for miles. For miners, such as Dane Hartwell who had transferred in from the closed Rhigos site in 1965, the seam disturbances at Pentreclwydau were the first they had seen.\textsuperscript{50} Hartwell describes his great surprise at moving from a pit, only a few miles north, which had no disturbance or washouts to a site that was ‘riddled’ with them. NCB documents in the National Archive dating from 1963 report consistent problems in the nine-feet seam, stating that ‘two faces of the four had been abandoned and the other two were operating at a one in four gradient causing difficult working conditions’.\textsuperscript{51} Other documents describe additional inward investment to open up first the Peacock seam and later the lower Cornish seam, but by 1965, the total annual production from the pit was only running at 102,000 tonnes,\textsuperscript{52} a mere quarter of the projected output.

Output figures from Pentreclwydau are sporadic and cannot be completely attributed to operational difficulties, but by the mid-1960s it was clearly running far below expectation, and further political upheaval was beginning to bite for the industry. The new Labour Administration that took office in 1964 was initially feted as a shot in the arm for coal production. The architects of nationalisation were seen as natural defenders of the industry, and yet by November 1965, the most comprehensive round of pit closures ever seen was announced with the imminent of projected closure of 125 mines, thirty-six of which were in south Wales.\textsuperscript{53}

Chapter Two will examine this, and the politics behind the closure more closely, but from a
geological point of view the demise of Pentreclwydau is rather summed up in a single
handwritten memo following an attempt to raise output and save the colliery by opening a
new ‘P4’ face. It reads ‘there were serious geological difficulties in developing the drift for
the conveyor’. It goes on to state that ‘it is now working, but too late to make the pit viable
by the end of the financial year.’ The note has a post-script which is emblematic of the whole
project. It reads simply, ‘Production department add that the take will soon run into faulted
ground’.54

In retrospect, it is easy to suggest that the geological problems of the area around
Pentreclwydau colliery were known and well-documented, and that the blame for its closure
lay with the NCB’s desire to make use of the facilities at Aberpergwm leading them to site
the drifts too close to the known faults and disturbances. Perhaps ultimately, increased
investment, mechanisation and modern efficient working practices were not enough to
overcome the issues that had earlier deterred the traditional anthracite miners from
exploiting the area. Maybe the geology was just too difficult and the coal too hard to win,
yet there were undoubtedly other factors at work. The local culture, both inside and outside
of the pit, the instability in the industry, and in national energy policy, changing attitudes and
ambitions amongst younger workers, and a world outgrowing its need and dependence on
coal.

54 Glamorgan Archives (GA), Colliery closures, various (Handwritten note dated 26 Jan 1967) DCNB-11-4-8
Chapter Two – The pit and the people

The NCBs masterplan for the northern Neath Valley saw Pentreclwydau conceived as a long-term ‘receiver pit’, gradually increasing its workforce by absorbing workers from nearby sites as they shut faces, scaled back production or closed entirely. Locally these sites included Rock, Glyncastle, and Rhigos, along with displaced workers from the Dulais and Tawe Valleys who could not be redeployed in those areas. 55 The final piece of the jigsaw was always intended to be the closure and transfer of operations from Aberpergwm, the area’s largest and most dominant mine with cultures and traditions ‘as old and any in the coalfield’.56 At full operation, Pentreclwydau was projected to employ around a thousand workers all helping achieve the proposed output of 400,000 tonnes per year.57

Historically, the anthracite pits of south Wales were smaller, more close-knit and with more locally based workforces, than those of the more productive steam coal pits to the east. Miners from more diverse and ‘cosmopolitan’ areas, such as Merthyr and Aberdare, were generally inclined to consider anthracite pits ‘parochial or clannish’.58 Howells suggests that this created greater problems in the area when merging workforces because historic rivalries had greater impact.59

Pentreclwydau was a more modern proposition, situated in an area had not previously been developed, so it was more remote from nearby villages than the traditional pits. It was

55 Woodhouse, Giant pits planned for Wales’, p1.
56 Dane Hartwell interview (18 Mar 1980), South Wales Coalfield Collection AUD/125.
purposefully designed to impact as little as possible on the natural face of the Valley, the site screened from view behind the trees on the southern edge of the forest, vehicle entrances only visible from the Neath/Glynneath road only a few dozen yards to the south. So discrete was the site, at least one long-term local resident - a teenager in the mid-1960s - travelled the road daily to the local grammar school without ever realising that there was a mine there at all. 60 Most workers accessed the site through Aberpergwm, riding the 2200 yards to the drift entrance on the spake, a tram with tilting seats that remained level as it continued down to the coalfaces. 61 This light rail link between the drift and the pit head in Aberpergwm was not only physical, but also culturally symbolic. Were the site ever to replace Aberpergwm, it would have to adopt, and eventually absorb the long-standing customs and hierarchies of the older pit or else create a new tradition peculiar to Pentreclwydau.

The pit’s first significant tranche of workers transferred directly from Rock Colliery upon its closure in 1959. 62 Further workers began to trickle in as other pits closed faces or scaled back production, but not in great numbers, as the construction work to open faces was not progressing as planned. 63 By January 1960, the year that the site was originally projected to be at full production, there were only 362 workers on site. 64 Delays such as this were extremely damaging. In a time of almost monthly pit closures, there should have been little difficulty in redeploying surplus staff for the newer projects if they were ready, however, in ‘The Fed’, Smith and Francis explain that further west in the anthracite belt three closures

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60 Roy Bowen interview (12 Mar 2021).
62 Anon, Welsh Coal Mines website available at https://www.welshcoalmines.co.uk/Photo.htm [Accessed 24 Apr 2021].
63 Edward Thomas interview (21 May 1982), South Wales Coalfield Collection AUD/147.
64 National Archives, Authorisation, and control of capital expenditure: South Western division (Coal 23/163)
alone – Mount, Steer and Cwmllynfell - affected 1400 workers at a time when there were only ninety-six vacancies in the area. The situation further east was no better where the significant closures in the Dulais and Tawe Valleys were not wholly offset by new positions in Cefn Coed, Abernant or Pentreclwydau.

The period between 1959 and 1968 saw tremendous uncertainty in the Neath Valley mines, with many full and partial closures in the area, that created a something of an employment merry-go-round. This was a time where, in the words of miner’s leader Will Whitehead, men were being moved like ‘pawns on a chessboard’ from one face and one pit to another with regularity. It was theoretically possible for a younger worker to have entered the industry in 1957, and in ten years to have worked at Rock, Ffaldydre, Glyncastle and Pentreclwydau experiencing closure in each site. Greater travel costs, longer commutes and longer working days were all the standard ‘rewards’ for a miner who chose to remain in the industry after a closure, often reducing in a single stroke both their leisure time and the value of their wage packet.

In the 1960s, this type of uncertainty was contributing to a significant drift away from the industry. Large factories - light industry - with cleaner, better paid jobs were beginning to compete with the traditional industries. In the Neath Valley, the main non-mineral employers were British Aluminium in Glynneath and Cam Gears, a manufacturer of gearbox parts, based in Resolven. Locally, closures in pits such as Rock, Onwllyn and Glyncastle presented workers with a clear and appealing alternative to remaining in the industry.

69 Henry Caswell interview (03 Mar 2021)
Curtis interprets this as further evidence of the super-pit policy backfiring on the NCB, and as far as Pentreclwydau is concerned, this was certainly an unexpected consequence.

Hartwell explains that when the final drift at Rhigos closed in 1965, only he and ‘around three others’ transferred out to Pentreclwydau.71

Between 1949 and 1969, the number of south Wales mineworkers fell from 106,000 to 40,000.72 With experienced manpower drifting away from the industry, and an aging workforce, attracting school leavers became a significant focus for the NCB. Poster campaigns and recruitment films such as 1965’s *Big Job* were created to raise awareness of paid apprenticeships, using pop culture back-drops often depicting unrepresentative images of only the most modern and advanced facilities.73 But, as with their existing workers, the coal industry was losing the battle to alternative employers.

Culturally too, there was a shift away from the tradition of mining. Teenagers were often advised by a parent or older relative who had experienced the industry first-hand, to divert onto a different career path. F. Zweig, quoted in Howells, explains that ‘the fathers discourage their lads as much as possible...I often heard vows that their lads would never go down’.74 One former Cwmgwrach resident who left school in the mid-1950s chose, on the advice of his ex-miner father, to take up a youth apprenticeship programme, landing a job at Cam Gears on completion.75 Greater mobility and opportunity were the key developments that set that first post-war generation apart from their parents. This emergence of what was described by David Adamson as the ‘new working-class’, was characterised by a community

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71 Dane Hartwell interview (18 Mar 1980), South Wales Coalfield Collection AUD/125.
73 *Big Job*, NCB Film Unit (British Film Institute, BFIVD851, 2009).
75 Henry Caswell interview (03 Mar 2021).
supported by higher private car ownership, with a greater range of employers, less reliance on a single industry and with a wider spread of working locations. As this was changing the nature of traditional mining communities, breaking the historic link between employer and neighbour, the shared experience became far less important to the younger generations, and working the mines was no longer an expectation for most.\footnote{David Adamson, ‘The New Working Class and Political Change in Wales’ in \textit{Contemporary Wales an annual of economic & social research}, 1988 Vol. 2.}

For those who saw their future in the coal industry, the threat of closure never far from their minds, and it is perhaps not surprising that, by 1965 absenteeism in south Wales was running at 2.5% higher than the national average. Some, such as respected industrial correspondent Trevor Evans believed that the miners were endangering their own jobs.\footnote{Evans, ‘Land of my Fathers’ \textit{Daily Express}, 23 Nov 1965, p11} With greater hindsight, Ben Curtis disagrees, suggesting that absenteeism was more of a symptom of the decline rather than a cause\footnote{Curtis, \textit{The South Wales Miners}; 1964-1985, p77.}. In any case, there does seem to have been a long-standing tradition in the industry, perhaps dating back to the era of piecework, for workers to take time off if they could afford to, so perhaps this issue was little more than a convenient scapegoat.\footnote{Miners Absenteeism, Media Archive for Central England. 1965 [online] available at \url{Watch Miners Absenteeism online - BFI Player}}

New arrivals at a ‘receiving’ pit often upset the balance of the workforce. Tensions arising from duplication of responsibilities was common and the additional subsidised travel costs and increased numbers also have a detrimental effect on the pit’s productivity figures, so new workers were often welcomed less than enthusiastically.\footnote{Griffiths, ‘The New Anthracite Industry’, p398.} If arriving at a traditional site with strange and peculiar customs was a daunting prospect for a miner, entering Pentreclwydau was a different experience altogether. As Hartwell discovered, there was no...
set hierarchy, no official customs, just a jumble of individuals and cliques all working
generally in independence. In his words, there were ‘Rock men, Aberpergwm men and
Glyncastle men...but they were never Pentreclwydau men’. While this lack of identity may
have been detrimental to the atmosphere within the pit, there were suspicions that it
worked to the benefit of the management. Aberpergwm and Pentreclwydau were a merged
lodge, but with the restrictive layout at Pentreclwydau, the welfare facilities were located on
the Aberpergwm side. The lodge office was further still, based in Glynneath. If
Aberpergwm had been wound down and the workforce transferred, the lodge would have
focussed entirely on Pentreclwydau, but as it stood, there was a perceived bias towards the
historic Aberpergwm that left some in Pentreclwydau feeling as though they were ‘fighting
the lodge, as much as they were fighting management’. Located away from the direct
focus of lodge officials, management gained an uncompromising reputation. In a dispute
over job demarcation in 1961, a union official was reported to have said, ‘management at
Pentreclwydau were making their own conditions...have encroached on worker’s rights and
brought a lot of unrest to the colliery. An accusation echoed strongly by Hartwell whose
experiences led him to conclude, ‘at Pentreclwydau, managers could get away with
anything’.85

In November 1963, demarcation and wages again led to a dispute at Pentreclwydau
which resulted in a week-long strike that disabled four pits and involved eight-hundred
workers. As a shared lodge, Aberpergwm were obliged to come out in sympathy, but as their
washery also served Cwmgwrach and Blaengwrach, production in these pits had to cease

81 Dane Hartwell interview (18 Mar 1980), South Wales Coalfield Collection AUD/125.
82 Dane Hartwell interview (18 Mar 1980), South Wales Coalfield Collection AUD/125.
83 Dane Hartwell interview (18 Mar 1980), South Wales Coalfield Collection AUD/125.
85 Dane Hartwell interview (18 Mar 1980), South Wales Coalfield Collection AUD/125.
too\textsuperscript{86}. After a week, the matter was resolved, and the production restarted, but across the four pits, reported losses were limited to two thousand tonnes in total.\textsuperscript{87} From this, it seems fair to surmise that Pentreclwydau’s original projected daily output of 1900 tonnes was impossibly wide of the mark. There is no solid evidence that this deficit was due to problems with mechanisation, but the similarity of experience with nearby Glyncastle is enlightening.

Eddie Thomas explains that in the late 1950s, Glyncastle had been threatened with closure if it could not mechanise but attempts proved catastrophic. The site only improved its output again when it switched back to pick and shovel methods.\textsuperscript{88} Similarly, Hartwell suggests that despite the cutting-edge machinery in Pentreclwydau, the faults made it impossible to win the coal cleanly, and they also resorted to traditional methods to increase output.\textsuperscript{89}

Glyncastle’s closure in 1964 was, in the Neath Valley at least, the first such post-nationalisation closure to spark significant protest.\textsuperscript{90} Thomas explains that while the men were willing to accept the closure, the NUM, perhaps in a symbolic gesture, decided to protest.\textsuperscript{91} Union officials and Neath MP Donald Coleman strongly lobbied for the pit’s continuation and local demonstrations were arranged but all to no avail.\textsuperscript{92}

By the time of the closures at Glyncastle and Rhigos, Pentreclwydau’s reputation as a difficult, even a doomed pit was widespread. It was commonly believed that both were closed to provide manpower to Pentreclwydau, but Eddie Thomas reflects a pessimistic

\begin{itemize}
\item \textsuperscript{86} Crocker, ‘Four pits affected by valley strike’, \textit{Neath Guardian}, 01 Nov 1963, p1
\item \textsuperscript{87} Crocker, ‘Four pits affected by valley strike’, p1
\item \textsuperscript{89} Dane Hartwell interview (18 Mar 1980), South Wales Coalfield Collection AUD/125.
\item \textsuperscript{90} Anon, ‘Closure leak stuns valley village’ \textit{Neath Guardian}, 02 Oct 1964, p1
\item \textsuperscript{91} Edward Thomas interview (21 May 1982), South Wales Coalfield Collection AUD/147.
\item \textsuperscript{92} Anon, ‘Lord Robens now asked to intervene’ \textit{Neath Guardian}, 09 Oct 1964, p1
\end{itemize}
mood, stating that ‘everybody knew that Pentreclwydau was a “white elephant”’.93 A site which had cost so much to establish and had been touted as the future of mining in the valley, was now best known locally for its poor output, and its almost inevitable failure. It was not as though the NCB would have been unaware of the risks inherent in these projects. In 1962, one of their original flagship developments, at Rothes in Ayrshire, was closed in startling failure.94 Ieuan Griffiths article ‘The New Welsh Anthracite Industry’ published later that year, sets out clearly the risks, identifying similar problems that sites such as Pentreclwydau, Cynheidre and Cefn Coed were facing – poor geology, lack of cohesive identity, manpower drift, and absenteeism - and urging the lessons of Rothes to be learned rather than repeated.95 Arguably though, for Pentreclwydau, Griffiths’ warning came too late to have any effect. The decline was by that time almost irrevocable and the focus at management level switched from improving, or turning round these sites, to how best to manage their decline and closure.

When the Wilson Government that took office in 1964, there was a general sense in the industry that they would reverse Conservative energy policy, and give greater focus to coal production, but instead, they accelerated the rate of pit-closures and managed decline within the industry.96 Curtis attributes this broadly to the influence of Civil Servants who provided the continuity for multiple Energy ministers both Labour and Conservative.97 Under a Labour government, the National Union of Mineworker’s (NUM) strategy was less

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93 Edward Thomas interview (21 May 1982), South Wales Coalfield Collection AUD/147.
97 Curtis, The South Wales Miners; 1964-1985, p64.
aggressive, more conciliatory to avoid damaging the electoral prospects of the party.\textsuperscript{98} However, as was the case with Glyncastle, it was often difficult to understand why action was attempted to save some pits, but not others. The government’s increased focus on oil and nuclear energy was a genie that Labour had little intention of rebottling. In 1966, the discovery of large reserves of natural gas under the North Sea, another long-term source of cleaner energy for use in power generation and domestic settings, created an existential threat to the coal industry.\textsuperscript{99} North Sea gas, once tapped and piped would replace ‘town gas’ - the methane mining by-product – in many areas, providing a double blow to the industry that it was ill-equipped to withstand.

High level discussions around the future of Pentreclwydau were evident from as early as May 1966 when the NCB threatened closure due to ‘high absenteeism ‘and a resultant slump in output per manshift.\textsuperscript{100} The doomed attempt to open the P4 face did little to improve matters, and the decision to close appears to have been a foregone conclusion by December 1966.\textsuperscript{101} The initial closure date of March 1967 was deferred for two months ostensibly to allow the workers to improve output, but a memo from NCB president Lord Robens suggest that the real reason was political. Cefn Coed, with 1700 workers, was being primed for closure, and the public reaction was expected to be incendiary. Robens states that Pentreclwydau had ‘no possible future’ and that the NUM’s Will Paynter is using the pit to ‘break the habit’ of referring closures through the appeals procedure.\textsuperscript{102}

Pentreclwydau colliery was closed on the 27\textsuperscript{th} of May 1967 with the displacement of 412

\textsuperscript{99} Anon, ‘No jobs in the pits’ \textit{The Times}, 31 Aug 1967, p7.
\textsuperscript{101} Glamorgan Archives (GA), Colliery Closure Form, Dec 1966, DCNB 11-4-8.
\textsuperscript{102} Glamorgan Archives (GA), Letter from Lord Robens to AF Kellett, 7 Mar 1967. DCNB 11-4-8.
workers. Dane Hartwell recalled a ‘sense of relief’ when the closure was announced.\textsuperscript{103} Despite this, he personally experienced more upheaval and uncertainty in the months that followed, eventually settling at Tower colliery after a prolonged period of itinerancy. While such experiences likely pushed more away from the industry, there seems to have been no tears shed at the demise of Pentreclwydau. Curtis reports that an unofficial workers group planned protests, but they were swiftly persuaded against it by the NUM.\textsuperscript{104} Reports of the closure in the local press are conspicuous by their absence. Comparing reaction to Pentreclwydau’s closure to that of Glyncastle in 1965 or Cefn Coed in the Dulais Valley later in 1967, the difference is stark. Indeed, a full campaign was launched to save Cefn Coed, complete with full media coverage\textsuperscript{105} and another significant intervention from Neath MP Donald Coleman who brought the matter up in the House of Commons.\textsuperscript{106}

That said, the result was ultimately the same, as Cefn Coed closed despite the protests. But that was not the end of the story as in 1971, Blaenant, a new drift was sunk at the site and was a notable success, producing record outputs from a virtually fault-free face.\textsuperscript{107} Whether a similar triumph could have existed under the Rheola Forest may never be known. Dane Hartwell’s opinion was that Pentreclwydau could likewise have been turned around, by sinking a shallower drift further under the mountain, but with no guarantees and such a poor track record, there seems to have been no appetite for such an endeavour. Perhaps this is because the real success story in the Neath Valley, turned out to be Aberpergwm. Pentreclwydau was designed as a long-term replacement to exploit the field west of the Pwlilau Bach fault, yet Aberpergwm not only survived, but thrived, remaining the largest pit

\textsuperscript{103}Dane Hartwell interview (18 Mar 1980), South Wales Coalfield Collection AUD/125.
\textsuperscript{104}Curtis, \textit{The South Wales Miners; 1964-1985}, p69.
\textsuperscript{105}Curtis, \textit{The South Wales Miners; 1964-1985}, p66.
\textsuperscript{106}Hansard, HC Deb 25 July 1967 vol 751 cc465-523
\textsuperscript{107}Anon, \textit{Welsh Coal Mines} website available at \url{Photo (welshcoalmines.co.uk)} [Accessed 24 Apr 2021].
with the oldest customs in the area, its strength consolidated in 1975 when their machines crossed the fault and linked up with the faces in Pentreclwydau. The NCB at Aberpergwm survived until 1985 when it was closed as the industry was effectively wound down by the Thatcher government. In the 1990s private mining restarted at Aberpergwm and the site is still being mined to this day, while Pentreclwydau was revived - albeit in name only - when the site of the old Venault mine, west of Cwmgwrach was reopened briefly as Pentreclwydau South, producing the ‘Big P’ brand of anthracite.

108 Anon, *Welsh Coal Mines* website available at [Photo (welshcoalmines.co.uk)](https://welshcoalmines.co.uk) [Accessed 24 Apr 2021].
109 Anon, *Welsh Coal Mines* website available at [Photo (welshcoalmines.co.uk)](https://welshcoalmines.co.uk) [Accessed 24 Apr 2021].
110 Anon, *Welsh Coal Mines* website available at [Pentreclwydau Drifts (welshcoalmines.co.uk)](https://welshcoalmines.co.uk) [Accessed 24 Apr 2021].
Conclusion

The factors that led to the failure of Pentreclwydau Colliery are difficult to weigh-up because it is impossible to know if the pit could have survived if even just one of the contributory factors had been different. There is little doubt that the grand plans of the post-war nationalised coal industry were overambitious. The cultural, political and technological landscape of the 1950s and ‘60s moved more quickly than at any point in the previous century, and it seems the coal industry was particularly caught off guard by this. In an era that they set out expecting to dominate, they found themselves more expensive, less convenient, and less clean than the alternatives within a decade. A new generation of workers, a new working class with ambitions and demands driven by consumerism, determined to make a healthier and less strenuous life for themselves, were less inclined to maintain the structures of the societies and communities that they had grown up in. Against this difficult, ever-changing background, it was inevitable that brand-new pits would struggle to survive, but Rothes aside, they generally did, so we must turn again to the specifics at Pentreclwydau.

In the terms set out in the introduction to this essay, the two internal factors identified that led to closure were the difficult geology of the pit, as outlined by Griffiths and Blandford, and problems with the internal culture to which Curtis attributed much of the blame. Through the course of this examination, a subtly different picture has emerged, one which conveniently draws these two factors together. In 1980, former Pentreclwydau miner
Dane Hartwell commented, that the mine was ‘sunk in the wrong place’\textsuperscript{111}. This might initially seem an over-simplification, but ultimately, all the specific problems at the pit were linked to the original location selected by the NCB.

The remote, and concealed position created a pit which was effectively invisible to the wider community. While discrete and easier on the landscape, the site’s remoteness from nearby towns and villages, and their shops, pubs and communities, appears to have exacerbated this isolation and dampened any potential community outrage over its closure. That additional distance – and necessary tram journey - from the pit head baths at Aberpergwm to the drift entrance created a longer working day for miners who often had a bus journey before and after their shift to contend with. The decision to share processing and welfare facilities and create a combined union lodge may have been more cost-effective and forward looking, but it also created an identity crisis within Pentreclwydau. Aberpergwm’s sense of history and tradition was too strong for the new pit to have any real standing or visibility at lodge level. The mixed workforce with all its conflicting customs and traditions, was unable to coalesce around a singular identity.

The faults and washouts that plagued the coal faces had a huge impact on output, and ultimately a pit was judged on its productivity and profitability. This was not an unknown quantity to the NCB in the planning stage. The disturbed ground in and around the immediate area had been extensively surveyed and was widely understood by locals who had worked the coal for generations, but the importance and faith placed in the modern mechanised techniques gave them belief that these problems could be overcome. While relative successes in places like Blaenant and Cynheidre were hard fought, they also stand as

\textsuperscript{111} Dane Hartwell interview (18 Mar 1980), South Wales Coalfield Collection AUD/125.
testament to what might have been had the workers at Pentreclwydau ever found a consistent and workable seam.

The muted reaction to the closure of Pentreclwydau colliery was perhaps a fitting epitaph for a pit that was conceived for a future that never came to pass. Any gamble that would have been necessary to save the site, would have been costly with no guarantee of success. And yet Pentreclwydau retains a sense of missed opportunity. None of the individual problems faced by the site were unique, even in the south Wales anthracite belt. It is arguable that they could have been overcome, but maybe the deciding factor was that there was no real desire, either from the workforce, management, or the local community to defend the site. No tears were shed, few lessons were learned, and the abandoned site soon decayed, remembered only as a pit that was obsolete almost as soon as it opened.

Wrong pit, wrong place, wrong time. Pentreclwydau was yesterday’s solution to tomorrow’s problems.
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