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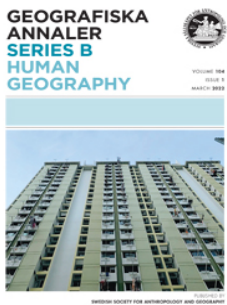
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‘Conditions in landscape which the public as a whole wishes to see and enjoy’ – electricity generation, amenity and welfare in post-war Britain

Luca Csepely-Knorr 

Manchester School of Architecture, Manchester Metropolitan University, Manchester, UK

ABSTRACT

In his 1975 article about planning and the Welfare State, Malcolm Harrison identified ‘specific social benefits’ as ‘possible welfare objectives’ of town and country planning in post-WW2 Britain. Some of these social benefits, such as the need for recreation, and the right to leisure facilities became key goals of Government policy and State-sponsored planning projects. Growing emphasis on leisure and recreation as part of an ‘improved quality of life’ and the increasing mobility and affluence also led to growing importance of opportunities for rural recreation and access to and preservation of the countryside. Through a series of case studies, this paper examines how these welfare objectives were materialized in the designed landscapes created around coal-fired power stations in Britain, commissioned by the nationalized Central Electricity Generating Board between 1957 and 1970. It will analyse how statutory duties towards workers’ welfare and environmental consciousness resulted in the involvement of the profession of landscape architecture, and how this helped the Board to navigate its duty to preserve the countryside as well as safeguarding the needs of communities.

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Introduction

The impact of the ideals of ‘welfare’ and the role the State and nationalization played in the creation of the built environment in the post-war period has been an emerging area of research in recent years (Lotz 2017). As Swenarton, Avermaete, and Van den Heuvel (2014), argued, design was one of the key areas to achieve ‘economic redistribution and social welfare’. Designed landscapes of various scales, created in relation to the state-supported building initiatives of the post-war era were ‘directly associated with ideas of social welfare and well-being related to citizens’ health, morals and ethics’, and therefore, can be called ‘welfare landscapes’ (Brae et al. 2020, 27). This paper will contribute to this evolving field of research and will investigate how key policies and ideals of welfare and amenity impacted the creation of landscapes of post-WW2 British reconstruction and how these landscapes contributed to understandings of the wider post-war social project and the ‘art of right living’ (Worpole 2000).

In Britain, the policies of Clement Attlees’ Labour Government during the period of 1945–1951, such as the National Health Service Act (1948), the New Towns Act (1946) or the Housing Act (1949), were all key reforms to establish a state aimed to secure ‘fair shares for all’, and contributed to the creation of the post-war Welfare State (Whiteside 1996). During the period of

CONTACT Luca Csepely-Knorr  l.csepely-knorr@mmu.ac.uk  Manchester School of Architecture, Chatham Building Cavendish Street Manchester M15 6BR United Kingdom  @lucaknorr

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1951–1979 that is often called the period of the ‘Welfare Consensus’, these ideas remained ‘deeply embedded in the British political and social culture’ and social benefits were identified as ‘welfare objectives’ of town and country planning (Fraser 2017, 269; Whiteside 1996; Harrison 1975). While usually not mentioned as part of the key legislations of the Welfare State, the 1947 Town and Country Planning Act was equally important as it provided control of land-use and development in the post-war period (Cherry 1974). This legislative context facilitated an unprecedented surge in building initiatives, including educational and public institutions, as well as various sports and leisure facilities in service of the public, and also in relation to the nationalized transport and energy infrastructures across the country (Lotz 2017; Pries and Qviström 2021; Möller 2017). Luke O’Donovan’s photo depicting the last cricket match at Ferrybridge C Power Station in West Yorkshire in 2019 just before the demolition of the iconic cooling towers shows how sites for workers’ welfare and public amenity were materialized in sometimes unexpected and diverse contexts (Pries and Qviström 2021) (Figure 1). These industrial and transport landscapes, motorways or power stations are also sites through which geographies of mid-twentieth-century British modernity – and the ideas of welfare can be assessed and explored (Gilbert, Matless, and Short 2013).

This paper will focus on a – so far in scholarly writing much overlooked – designed landscape typology: landscapes of coal-fired power stations. I will discuss how these spaces – commissioned and developed by the nationalized electricity industry – contributed to what George Goultly (1986, 37) phrased as a ‘growing demand for an improved quality of life’ – opportunities for community use, leisure, recreation and education, a key aspect of the wider welfare project in Britain. The



Figure 1. The last cricket match at Ferrybridge C Power Station in West Yorkshire before the demolition of the cooling towers in 2019 © Luke O’Donovan.

commission, design and delivery of the chosen case studies will be contextualized within policy, statutory regulations, the questions of ‘workers’ welfare’ and a duty towards the conservation of the environment; to understand their wider contribution to the development of British landscape architecture, the perception of industry and industrial landscapes and more broadly to the life of communities in Britain in the second half of the twentieth century.

Electricity generation, the countryside and the Welfare State in Britain

The Welfare State in Britain, according to historian John Brown has been ‘virtually synonymous’ with Sir William Beveridge and his 1942 report on ‘Social Insurance and Allied Services’, a model based on the three assumptions of full employment, free health service and adequate family allowance (Brown 1995, 1). The report and its findings were crucial in developing the 1945 Labour Manifesto and the programme of Clement Attlee’s first post-war Government. Nationalization of key industries – a long-standing Labour policy – was seen as a key move to achieve the goal of full employment and was seen as an ‘important way of creating a more equal society’ (Fraser 2017, 36). While nationalization per se is usually not classed as specific part of the policies creating the Welfare State itself, this paper argues, that it created a framework within which the creation of spaces for welfare and amenity were enabled and controlled by the State.

The nationalization of electricity generation and its transferral to public ownership was a result of the 1947 Electricity Act. In 1948, the British Electricity Authority (BEA) was established, and was responsible for generation and transmission to local boards, as well as for the development and maintenance of the supply system. The 1954 Electricity Reorganization Act replaced the BEA with the Central Electricity Authority (CEA) for England and Wales and, only a few years after in 1957, the Electricity Act dissolved the CEA and replaced it with the Central Electricity Generating Board (CEGB) and the Electricity Council (Sheail 1991). The CEGB became the largest spender (outside Whitehall) in the British Economy (Clarke 2013, 12).

This major industry in public ownership acting in the public interest, was responsible for developing and maintaining an efficient, coordinated and economical system of electricity supply. Their role included overseeing the creation of power stations that were hugely increased in size and built away from cities in rural areas. In the British context, next to road building, electricity generation and transmission probably had a more immense impact on the landscape than any other activity (Aldous and Clouston 1979, 53). It manifested in the erection of transmission lines and pylons across the country; in the building of nuclear and hydro-electric power stations in remote coastlands and national parks; and the relocation of coal-fired power stations away from town centres, into settings perceived as rural and part of the ‘countryside’, resulting in what Sylvia Crowe (1958, 9) – President of the Institute of Landscape Architects (ILA - today The Landscape Institute), – called the ‘greatest crisis of its history’.

Section 6 of the 1947 Electricity Act prescribed that the Electricity Boards ‘shall [...] promote the welfare, health and safety of persons in the employment of the Boards’, which remained a crucial part of the 1957 Act as well. Workers’ welfare on sites created and managed by the Board was promoted in a variety of ways – and the designed landscapes of power stations played an important part in this. But this was not the only aspect of policies that had a notable impact on landscapes. Section 37 of the 1957 Act, the so-called ‘Amenity Clause’, regulated the CEGB to take into account any effect which their proposals would have on the natural beauty of the countryside and on the flora and fauna. This was a highly important, and a quite unique situation, because as Aldous and Clouston (1979, 53) argued:

‘Here was a major state industry, set up by Parliament working under statutory guidelines which required it not simply to produce electricity as cheaply as possible, with little cosmetic landscaping tacked on as a gesture; but consciously to balance in each project the twin objectives of cheap electricity efficiently produced and respect for the environment.’

The 1957 Amenity clause was not the first of this kind of regulation. It was preceded by the 1943 Hydro-Electric Development (Scotland) Act and the 1955 North Wales Hydro-Electric Power Bill, but arguably was one of the most impactful (Bracey 1963; Sheail 1991). Through the introduction of the clause, the CEBG was regulated to preserve and create conditions in the landscape that ‘the public as a whole wishes to see and enjoy’ (Hinton and Holford 1960, 2).

Planning for workers’ welfare in industrial settings and using the landscape to create better conditions was not a new idea either, deriving from a long tradition of welfare capitalism in Britain (Chance 2017). Access to and preservation of the countryside were also widely discussed questions relating to developing ideas of leisure, health and equal opportunities. The patronage of the CEBG, a nationalized, public body, spending public money, regulated by the policies of the State provides a lens through which the materialization of these questions of welfare and amenity can be examined in the context of public opinion, state funding and the landscapes these interrelations created. The following parts of this paper, therefore, will examine landscapes from these two separate, but related, questions. Firstly, the idea of spaces for workers’ welfare in the ‘corporate landscapes’ of the CEBG and, secondly, the idea of rural leisure as a manifestation of amenity for the public – how the idea of access to and enjoyment of the countryside affected and developed the CEBG’s landscapes to become spaces for rural recreation, developing what they called ‘public relation value’. I argue that the success of the landscapes around CEBG power stations led the way for other nationalized industries to develop ideas of industrial and infrastructural landscapes for ‘specific social benefits’ as ‘welfare objectives’ provided by the State through nationalization (Harrison 1975).

Landscapes for workers’ welfare

Designed landscapes of, and around, industrial complexes played an important role in delivering certain aspects of welfare capitalism both in the United Kingdom and in the United States of America. As Elizabeth Fones-Wolf (1986) highlighted, employer-sponsored recreation and corporate leisure programs were one of the most visible aspects of welfarism in the United States. Before the Great Depression, leisure time activities such as company-sponsored sports teams, swimming pools, spaces for other sports such as bowling and a variety of classes from manual training to cooking were seen as essential part of welfare capitalism, aiming to deliver education as well as recreation to encourage ‘self-betterment’ and tackling the monotony of work. As Littman (1998, 88) argued these activities and facilities also aimed to introduce workers to values of upper- and middle-class leisure activities.

Helena Chance in her 2017 book ‘Factory in a Garden’ traced the effects of welfare capitalist thinking on the designed landscapes of factories in Britain and America. She highlighted that by the 1930s – developing on the basis of model factories such as Cadbury’s in Bournville – sports grounds and other buildings providing recreational and leisure facilities, such as libraries and concert halls were considered as essential part of a ‘modern factory’ (Dixon-Spain 1932). By the 1950s, the campaigning of interest groups such as the Industrial Welfare Society, resulted in the provision of recreation grounds and sporting facilities becoming a norm. Chance also argued that another aspect of the so-called ‘leisure revolution’ impacting factory gardens, that tends to be overlooked, was gardening as a leisure activity. Between the wars, gardening became ‘more than ever, a social and practical activity’, resulting in allotments and ornamental gardening opportunities. After WW2 and the end of the ‘Dig for Victory campaign’ allotment gardens increasingly became spaces for leisure and exercise as opposed to being essential for food production (Fowler 2020).

In 1955, the Industrial Welfare Society published a pamphlet, titled ‘Factory Gardens’, in which they suggested that ‘gardens and sports grounds had become a natural right for factory workers and not a gift of paternalism’ (Chance 2017, 177). However, Chance (2017, 198) argued that, due to changing economic development in the post-war period, signature corporate industrial sites were less common in Britain, and after a steady development of landscapes for workers welfare, their importance diminished. As the following parts of this paper will prove, the CEBG built heavily on, and

developed this tradition further. Their duty towards workers' welfare was firstly set out in the 1947 Electricity Act manifested in the opportunities their landscapes created around the stations.

Leisure, recreation and the countryside

While the idea of workers welfare, including recreation, had a strong impact on the spatial organization of industrial ensembles, these themes can also be seen to be included in governmental policy during the period of the creation of the Welfare State (Fraser 2017, 269). The 1945 Labour Manifesto, the basis of the programme of Clement Attlee's Government included 'healthy recreation' as part of a wider programme of cultural education including the provision of theatres, libraries and civic centres (Lamond 2019). The 1950 Labour Manifesto extended this provision and included the questions of access to the countryside for all hikers and cyclists, as well as the need for playing fields for children. This focus on access to the countryside as part of leisure and recreation provision developed from movements from the interwar period – similarly to the history of industrial recreation.

In his 1975 book 'Rural Recreation in the Industrial World', geographer Ian Gordon Simmons, author of the 1968 NATO report 'Land and Leisure in North Atlantic Countries' highlighted the importance of, and need for, leisure, outdoor recreation and 'wilderness' in man's welfare. He argued that in 'hyper-productive' societies in the West recreation became a human right, and in line with health and education, active rural recreation is a key part of a common vision of welfare. Growing mobility – including growing car ownership –, reduced working hours and increased holiday payments led to growing demand for access to the countryside in the first half of the twentieth century, but especially after WW2.¹ As David Matless (2016) and Ken Worpole (2000) argued this was part of a wider political, social and cultural debate around the questions of 'leisure and open-air culture within the context of citizenship'. Associations such as the Youth Hostel Association or the Ramblers Association, both established in the 1930s aimed to facilitate and advocate for open-air leisure. As Worpole highlighted, many high-profile members of the post-war Labour Government were advocating for 'open-air enjoyment of the countryside as part of the socialist vision of the good society' (Worpole 2000, 43). The 1949 National Parks and Access to the Countryside Act were viewed in this light as a 'people's charter, intended for everyone who loves to get out into the open air and enjoy the countryside', leading to a 'third force' in the countryside, alongside farming and forestry (Sheail 2001, 67).

While the need for and interest in recreation in the countryside was growing, the understanding of the countryside as being under threat was equally prominent. William Hoskins' (1977, 298) renowned statement that 'since the year 1914, every single change in the English landscape has either uglified it or destroyed its meaning, or both' signalled an understanding that the traditional 'English landscape' would be compromised and diminished by development. As David Matless (2016) analysed in his book, electricity generation, and the effect it had on the transformation of the country, were questions already debated widely during the interwar period. The work of the CEBG within this context came into the spotlight. As Christopher Hinton Chairman of the Board identified,

'the works of man dominated the lives of most town-dwellers. Visits to the countryside and coast offered them the only chance of escape, and here the difficulty arose. No matter how magnificent a power station might be in itself, nothing could compensate for its intrusion' (Sheail 1991, 117).

While the Board was responsible for developing an efficient energy system in rural settings it also had to respect and preserve the countryside and the – often nostalgic – view the public had of that particular kind of English landscape. Governed by policies such as the 1957 Electricity Act deriving from their status as a nationalized industry the CEBG was expected to balance the needs to create spaces for workers' welfare, cater for the growing demand for rural leisure activities and deliver an

efficient and economic system of electricity supply. In achieving these three closely interlinked goals and to demonstrate that they took their duty seriously, the Board had to positively address questions of amenity from the earliest stage of the design process and needed to rely on specialist input from a variety of experts including a relatively young profession, landscape architecture.

The landscape profession – ‘the new amenity planners’

Members of the Institute of Landscape Architects became key players in the design and delivery of power station in post-war Britain. The small organization, that was established in 1929, worked tirelessly during WW2 to create a network of professionals who could become involved in a variety of projects during the post-war reconstruction. As Sylvia Crowe, author of the pivotal book ‘The Landscape of Power’ remembered:

‘We had influential people from allied professions, [...] who realized we had a contribution to make, something to marry into their work. There was a missionary optimism mingled with anxiety that you could not overcome the destruction and invasion of the English countryside in time’ (Harvey 1987, 34).

The appointment of Lord (then Sir William) Holford – founding member of the ILA – as member of the CEGB with special responsibility for architecture and amenity, was proof that the CEGB regarded its statutory duty towards amenity seriously. Holford was a leading figure in town and country planning, as well as in institutions such as the Royal Fine Art Commission or the Historic Buildings Council, ‘whose stature and reputation for independent comment were beyond doubt’ (Sheail 120–121). Due to his involvement with the ILA, his understanding of the profession was different from fellow Board members’ who saw it ‘as synonymous with gardening, the provision of flower beds, augmented perhaps with a few trees’ (Sheail 1991, 122). In agreement with the Institute itself, Holford regarded landscape architecture as a strategic partner in the creation of large-scale amenity landscapes, and from 1957 their appointment early in the design process, sometimes as soon as the site selection stage, became the rule. Papers in the personal archives of Lord Holford, as well as in the archives of the Landscape Institute highlight the vast number of power station commissions being available to nearly all leading landscape practices in the UK, contributing to what Arnold Weddle termed as ‘the new amenity planners rise to power’ and a ‘stimulating demand for landscape architecture as a professional service’ (Weddle 1968; Sheail 1991). This collaboration – as this paper argues – also hugely contributed to the positive image that the Board aimed to create for itself, as a guardian of the values of the British countryside.

Visual amenity

The countryside, as Hopkins (1998, p. 65) highlighted is ‘an ideal deeply entrenched in the geographical imagination of Western societies’. To meet this ideal, and for the view of the countryside to be accepted, as Simmons (1975 p. 51–52) explained in the case of Britain, it had to have a ‘nostalgic but firm commitment to the old, the tried, the worn’. Cultural geographer Stephen Daniels (1993, 3) argued that the English landed estate was the predominant symbolic landscape in Britain. The reference to the eighteenth century was often recalled in the inter-war preservationist arguments as an ‘era of improvement’, and the landscape gardens of the time designed by key figures such as Capability Brown or Humphrey Repton were spaces that could accommodate modern structures (Matless 2016, 82–83). Repton, in his 1810 Red Book for Armley House, depicting his plans for the improved gardens for industrialist Benjamin Gott through the use of before and after images, included the industrial architecture of Armley Mill as focal points, or ‘eye catcher’. Helena Chance (2017, 66) in her study of British and American corporate landscapes, argued that industrial buildings ‘resembling palaces or country houses suggested associations with an aristocratic lineage’ and helped to avoid the negative associations usually linked to industrial development. The designed landscapes around them, played a crucial role in creating these visual connotations. Repton’s decision to control the views through which the visitors see the industrial

building in the garden allowed the Mill to take its place as a key element in the wider estate and to normalize its presence as part of the designed landscape (Brook and Csepely-Knorr 2021).

Growing demand for electricity and technical developments led to the increase of the size of the stations, and in consequence

[g]one was the notion that power stations should somehow be hidden or disguised. They had been stripped almost entirely of any decoration or symbolism. The structures were in any case far beyond a size where ornamentation could play a role (Sheail 1991, 212).'

Without any architectural symbolism in the appearance of the buildings themselves, the landscape became an even more critical tool to create a lineage between new infrastructures and the traditional appearance of the countryside. The employment of landscape architects – successors of Brown and Repton – meant that the preservationist view of the ideal landscapes of the countryside could be extended to the new ‘techno-landscapes’ of the reconstruction, and the CEGB’s official communication built heavily on this connotation (Matless 2016, 304). While talking about the role the CEGB played in the development of the countryside, it called itself the ‘the modern patron of landscaping art’, similar to ‘the great landowners of the eighteenth century’, who employed the founders of landscape architecture such as William Kent, Capability Brown or Humphrey Repton (Wacher 1965). But it was important for the designers as well, as they saw power station landscapes as critical contributions to not just the development of the countryside but also to the evolution of the profession. As Brenda Colvin, president of the Institute of Landscape Architects and the leading authority in the field of power station landscapes argued:

‘isolated human structures in remote places have, in the past, contributed to the grandeur of the scene. Our power stations, oil refineries, factories and waterworks must take their place, in time, with the pyramids, castles and temples of the past’ (Colvin 1970, 344).

Repton’s influence could also be seen in Colvin’s communication of her plans, channelling the before and after images of the Red Books when presenting her plans for power stations. Her design decisions to use colour and texture to create ‘counterparts as well as opposites’ between the structural, built elements and the living vegetation drew on Repton’s designs (Colvin 1970, 201). This understanding of iconic structures, such as chimneys and cooling towers as ‘eye catchers’ in the landscape led to the manipulations of large-scale areas in many cases even outside the ownership of the CEGB to achieve the best views. Probably one of the most iconic examples of this design approach was realized at West Burton power station, designed by landscape architect Derek Lovejoy together with architects Rex Savidge and John Gelsthorpe (Architects Design Group).

Located alongside the River Trent, the surroundings of the new station comprised flat agricultural land, consistently divided by ditches and hedgerows. The built complex included eight hyperbolic cooling towers, organized in two sets of four at either end of the station, two 182-meter-high concrete and four 76-metre-high steel chimneys. The siting and arrangement of the built elements were analysed through a variety of sketches and test models (Wacher 1965). Lovejoy seized the opportunity to take advantage of the height of these structures and configured them within the site to create a distinct feature in the flat landscape. Views were carefully directed towards the strong vertical elements, as complete screening would have been futile in the given topography. Detailed sketches of the proposed planting strategies demonstrated that Lovejoy’s aim to prove that his suggested landscape treatment would create interest in the landscape and that the new structure could be an integrated part of the view of the countryside. Perimeter borders were created using a horizontal water barrier. The landscape intervention at West Burton surpassed the site boundaries and the proposal included landscape treatment to areas in excess of a three-mile radius around the centre of the site. In his 1965 article Lovejoy described the design process’ assessment of ‘the most advantageous position for [...] trees up to ¼ mile from each viewpoint’. Planting therefore happened on both public land, such as road-verges owned by the local authorities, and land under private ownership, such as hedgerows, where trees were planted ‘in the centre of hedges in order to



Figure 2. West Burton power station © Stephen Richards (licensed for reuse under Creative Commons Licence) <https://www.geograph.org.uk/photo/1738725>.

avoid interference from and vulnerability to cattle.’ Species were selected on the basis of their future value for timber, which demonstrated Lovejoy’s long-term strategy for the character of the local area and the productivity of the newly created landscape – something large scale eighteenth-century gardens also promoted. He also produced a regional landscape plan which aimed to shape the long-term future of the landscape setting of the power station (Figure 2).

West Burton’s landscape is also pivotal as it was the first attempt to create a comprehensive prediction about the visual impact of the station. Beyond the carefully created and represented sketches, simple block models were also superimposed onto photographs of the existing landscape (Sheail 1991, 140). These methods of visual analysis, especially the idea of Zones of Visual Influence, were deployed and developed throughout the design process with the help of the CEGB’s own landscape team and landscape architect, Ronald Hebblethwaite. The method included the use of Ordnance Survey base maps, onto which were plotted the visible site elements from particular vantage points (Sheail 1991, 141). This, initially labour-intensive process, was later developed into a computerized version, published in 1975. As Moa Carlsson (2021) argued, the development of an objective testing methodology, as well as, the use of eminent designers as consultants can probably be traced back to the ideas laid down by Holford and his chairman Christopher Hinton in 1957. Hinton argued that, to resolve disputes between the public and the CEGB, trained professionals were needed who could ‘effectively negotiate public and industry interests’ (Hinton and Holford 1960). Both the analogue and computerized methods were used by the CEGB between 1960 and 1970 to select sites, design buildings and their configurations, and to design the landscapes and screening.

The landscape design at West Burton won a Civic Trust Award in 1967. The assessment highlighted that it is ‘an immense engineering work of great style which, far from detracting from the visual scene, acts as a magnet to the eye from several miles away, making an outstanding contribution to the local scene’ (England and Savidge 1982, 29).

Workers’ welfare and the ‘public relation value’

As Helena Chance’s research (2017) proved, the idea to create spaces for leisure and recreation in the landscape at industrial sites had a long tradition in Britain. Power station sites were not exempt,

and this was part of the statutory duty the 1947 Electricity Act created in terms of workers' welfare. Interventions to create spaces for sports and recreation were common even before the 1957 Electricity Act created a statutory duty to look after the landscape. However, the involvement of landscape architects and the large-scale planning duty of the CEGB due to the Amenity Act, meant that these spaces could be hugely enlarged and enriched.

The construction sites of power stations themselves were much larger than the operational sites after building works were completed. This presented opportunities to bring the landscape very close to the industrial complexes, something Sylvia Crowe argued for in her book, 'The Landscape of Power', when she claimed that in order to 'knit back' the new landscape to the original pattern of the countryside, the landscape needed to be brought as close as possible to the structure 'instead of the spirit of the structure pushing out into the landscape' (Crowe 1958, 37). Bringing the landscape close to the buildings also gave an opportunity to bring people close to the industrial site – engaging and educating them with and through the landscape. Christopher Hinton, himself a nuclear engineer, saw the opening up of the stations and providing facilities for the visitors as an 'an effective way of improving the Board's public image'. One of the first attempts to encourage engagement with the workings of power generation was to open a public viewing tower at Wylfa nuclear power station in Anglesey, Wales that was heavily used by visitors. To facilitate these visits, a public open space, parking and toilet facilities were also built (Sheail 1991, 123). Similarly, at Cottam power station, landscape architects Kenneth and Patricia Booth arranged the landforms to create an artificial hill to act as a viewing platform (Booth 1968).

However, the landscapes provided opportunities on the sites beyond allowing visitors to view operations. As the following parts of this paper will argue, this more complex engagement with the public developed through two strands: the extension of the facilities originally created as part of the leisure complexes for the welfare of the employees of the power station, and from the broader concerns of the public towards amenity which included growing environmental consciousness and a need for conservation activities.

The designed landscape around Eggborough power station in Yorkshire is probably one of the most complex example aimed to create spaces for workers' Welfare through a variety of leisure and recreational opportunities. The landscape was designed by Brenda Colvin in 1962, by which time she had acquired a wealth of experience in this typology. In her first report, she already highlighted a substantial non-operational area for recreational use (MERL AR COL A//2/2). She identified enough space for two football pitches, a rugby pitch, bowling greens, a hockey field, tennis court and a cricket pitch. More than a decade later, when her practice finished working on the project, Hal Moggridge, her business partner from 1969 reported that after a few years

'the life brought back to the site by vegetation created a setting which came to life also in human terms. Outdoor recreations were introduced, such as market gardening, practice golf and cricket. Thus a simple landscape design concept has become, through good landscape management, the source for enrichment through human use' (MERL AR COL A//2/2) (Figures 3 and 4).

The wide variety of amenities in Eggborough led to a continuously evolving set of recreational uses and oral history interviews recall the important role the station's landscape played in the life of the community. As interviewees (Toomey 2020) described, a constantly changing set of facilities were originally designed to cater for staff, however, these were soon extended to include members of the local community, such as the Eggborough Football team. The sports facilities were changing according to the needs of the employees, including the creation of an area for playing squash, that was not part of the original plan. Open days welcoming communities offered additional attractions, such as model trains and traction engines. The leisure and recreational facilities around Eggborough were much appreciated by the wider community as well as the workers and were in use up until recently, when the privatization of the site led to the closure of these much-valued social assets. While Eggborough is a good example of how the CEGB built on previous ideas of providing for workers' welfare, and through these opportunities for the wider communities, Drakelow – another



Figure 3. Eggborough Power Station, Golf course. ©Museum of English Rural Life / Landscape Institute [Brenda Colvin Collection].



Figure 4. Eggborough Power Station, Allotments ©Museum of English Rural Life / Landscape Institute [Brenda Colvin Collection].

site designed by Colvin – was pioneering in acknowledging ‘the wider social responsibility’ of generating electricity (Goultly 1986).

Colvin was appointed landscape consultant to Drakelow power station in the East Midlands in 1959, when the site already accommodated two earlier power stations, Drakelow A and B, and a third, Drakelow C, was in the process of being designed. In her report, Colvin made it clear that she saw the opportunities in building the power station and restoring the landscape ‘to esteem, with the additional buildings making it an outstanding feature of the locality in a distinguished setting’ (MERL AR COL A/2/1). Being next to the river meant that certain areas of the site were affected by flooding and had a high water table. While these areas were mainly used for pasture, Colvin considered them carefully both in relation to the aesthetic opportunities the views of the cooling towers and the water provided and in terms of the possibilities for wildlife, by creating a duck pond to encourage wildfowl population, that later became the basis for later developments. As in case of Eggborough, the landscape was enriched with social functions including an area south of the cooling towers, marked as a ‘playpark’, grouped together with sports fields for the wellbeing of CEGB employees.

In 1965, Colvin represented the Institute of Landscape Architects at the ‘Man and his Environment’ Conference, organized by the Nature Conservancy (later the Nature Conservancy Council), as part of a series of events organized across the country in preparation for the European Conservation Year. The event – also attended by members of the CEGB–, aimed ‘to bring together conservationists and major land users with the purpose of identifying ways of harmonizing conflicting claims on rapidly dwindling acreage of undeveloped land’ (Sheail 1991, 124). The discussions pointed out local education authorities’ need for sites to create field study centres for the promotion of environmental studies. The sites the education authorities were aiming to find, needed to fulfil two major criteria: a woodland area and an area close to water, which were provided at all power station sites because of the need for screening and cooling. As Colvin and the CEGB agreed ‘landscaped areas designed to provide a visual screen to the Station cannot be used for operational engineering purposes or let off to agriculture, but such areas can easily be adapted for use for field studies’ (MERL AR COL A/2/1).

The idea was taken forward and the educational programme enriched. The Nature Conservancy, the educational authorities and the CEGB agreed that this educational project should go beyond the environmental and natural sciences and consider questions such as electricity generation. The CEGB provided information booklets about this aspect to teachers, because, as they stated,

‘visiting children obtain an impressive view of ‘C’ Station with its huge cooling towers dominating the landscape. On the occasion of their first visit most children will gaze at these large structures and ask many questions about the production and uses of electricity. It is desirable that these questions should be answered correctly, and a simple booklet has been prepared for use by the teachers in charge of parties’ (MERL AR COL A/2/1).

On 14th July 1967, two years after the initial discussions, a nature trail, running through the woodland area next to the road, and a field study centre opened. It was the first nature trail in an operational industrial site in Europe and was operated by a management committee representing the local education authorities, teachers, the Nature Conservancy, local naturalist and conservation bodies and the CEGB. The trail was complemented with a small on-site learning centre, equipped with books, microscopes and pictures to help children and teachers in the identification of flora and fauna (Figure 5).

In 1969, a few years after the successful opening of the nature reserve, Colvin was in touch with ornithologist Peter Scott, who visited Drakelow. The visit was prompted by the realization, that the large-scale gravel extension areas of the power station site had become rich in wildfowl populations. The discussions led to the opening of a wildfowl reserve in 1970. Parallel to the creation of the reserve, the nature trail was extended and the sporting facilities were enriched by the creation of a fishing area controlled by the ground maintenance team (MERL AR COL A/2/1).



Figure 5. Drakelow Wildfowl Reserve ©Museum of English Rural Life / Landscape Institute [Brenda Colvin Collection].

In 1970, the local newspaper, the ‘Burton Daily Mail’ published an article about the new landscape of the power station and stated that

‘the reserve will be used by ornithological and other naturalist bodies for observation and research and by local education authorities for conducted visits by parties of older children. Eventually, it is hoped to open the area regularly to the general public’(MERL AR COL A/2/1).

The station itself was decommissioned and demolished in 2006, but the nature reserve is a freely accessible open space today, managed by the Derbyshire Wildlife Trust (Figure 6).

Drakelow’s landscape and its role in enhancing the CEGB’s public image became an example followed across the country. The nature trail and the wildfowl reserve achieved much publicity and acclaim, including a Countryside Award in 1970. Following on from this example, the



Figure 6. Drakelow Nature Reserve in 2021. © Luca Csepely-Knorr.

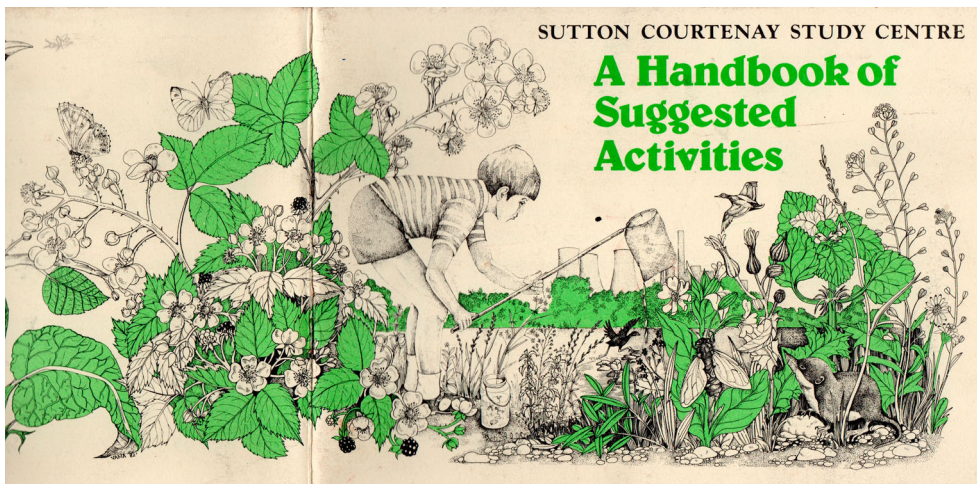


Figure 7. Didcot Power Station Information booklet for children about the Nature Reserve. ©CEGB published under fair dealing guidelines <https://www.gov.uk/guidance/exceptions-to-copyright#fair-dealing>.

CEGB in collaboration with County Councils, educational authorities and local ornithologists' and naturalists' societies sponsored a variety of conservation schemes on the sites of both substations and power stations (Goultly 1986).

In the case of Rugeley power station in Staffordshire where the landscape was also designed by Brenda Colvin, the lake created on site was used by the CEGB's sports and social club for sailing and angling. The water was stocked with carp and trout and served as a resting place for migrating birds, including Canada geese. A field study centre was created around Didcot power station – designed by Frederick Gibberd – in Sutton Courtenay, which was visited by 2000 children per year in the early 1980s. The CEGB published several booklets for the centre that explained and introduced not just the wildlife around the power station, but also a short section about how electricity was made at Didcot. The beautifully illustrated booklets listed the various species living around the site, and contained activities and informative descriptions (Figure 7). The Skylark Centre and Nature Reserve next to Drax power station in North Yorkshire designed by landscape architect Arnold Weddle became an important place for local children during the summer holidays, and the ponds were used for fishing for CEGB employees and their families (Thomas 2022).

By 1982, more than 20 CEGB sites were used for various public activities as well as environmental centres. Nature trails, bird and wildfowl reserves, environmental study centres, angling and water recreation centres were accompanied by ecological and conservation activities. The CEGB's pioneering work was followed by other areas of infrastructural planning. In 1961, Michael Porter was appointed as the first Landscape Advisor to the Ministry of Transport. The 1973 Water Act also created a duty to promote 'amenity' by the Regional Water Authorities (Aldous and Clouston 1979; Sheail 1992). In 1974 in his maiden speech to the House of Lords, the Prince of Wales quoted a landscape report, that 'marked one of the first occasions in the history of reservoir construction that recreational potential had been written into the primary plan'. As he noted 'This was a great step forward ... (which) should become common practice'. The reservoir in question was Brenig Reservoir in Wales, designed by Colvin and Moggridge. With this, the recreational use of infrastructural landscapes, became common practice (Moggridge 2017).

Conclusions

Malcolm Harrison in his 1975 article about planning and welfare defined the latter as a 'more explicit social planning, either related to remedial approaches or linked with community

facilities' provision and social development' (Harrison 1975, 264). Using landscapes around industrial sites to create spaces for recreation and leisure as part of welfare provision for workers had a long tradition in Britain, and it became key in the work of the nationalized electricity industry, to fulfil their statutory duty towards workers' welfare. But beyond this, and through their other statutory duty towards the landscape and the countryside they also created landscapes available for the wider public. As Phil Drabble naturalist and TV presenter explained in the 1978 documentary 'A Natural Question' more and more CEBG land was made available 'for the leisure pursuits of the general public such as fishing, bird watching and even good old walking' – key activities of what Simmons (1975) identified as rural recreation. The period of the nationalized industry allowed the extension of some welfare provision from private employee use to be available to the public.

The creation of these large-scale landscape interventions was inseparable from the nature of their landowner: the nationalized electricity industry and its legal duty to workers' welfare and amenity and conservation of the landscape. As George Goulty Architect of the CEBG phrased it, the CEBG was managing industry on the public's behalf, and through their landscapes they supported 'the growing demand for an improved quality of life' (Goulty 1986, 37; Høghøj 2020, 1046). Muthesius (2016, 117) stressed that 'the central innovation of the welfare [state] was, firstly, to act on a very large scale and, secondly, that it dealt with services that had hitherto been provided by private enterprise'. Landscapes financed by the nationalized electricity industry are key examples of such a provision. Their scale meant that their effect went far beyond ownership boundaries and provided visual amenity as well as recreational spaces for not just their own employees but the broader community through sports and educational facilities and access to rural recreation, that was increasingly seen as part of the focus on health and welfare, demonstrated by party manifestoes and government policies (Lamond 2019). As ex-employees and users of Drax power station remembered 'the social aspect of it [was] quite big' the 'environment shaped the community just by virtue of the fact that it was that many people worked on these places' and were able to enjoy the opportunities (Thomas 2022).

While the impact and importance of power landscapes on the appearance of the countryside of Britain and the life of the local communities are key in understanding their values and wider contribution to British life in the second half of the twentieth century, it is also important to note how crucial this typology was in the development of the profession of landscape architecture. In 1957, architect C. G. Kemp called for 'increasing propaganda so that prospective employers in particular, and the public in general, become more aware of the special role of landscape architects and the benefits to be obtained from making the fullest use of their services' (Kemp 1957, 12), Arnold Weddle, in 1968, highlighted that 'the Board [CEGB] already employs most of the country's available landscape consultants to assist with this work' and that 'there are not enough landscape architects to meet the rising demand for landscape skills in Britain' (Weddle 1968, 302). Weddle's notion that the decades after WW2 led to the 'amenity planners' rise to power', can be quantified by the value of landscape-related contracts: while in 1963–1964 these were worth £4,860 in 1966–1967 it was raised to £109,103 (Sheail 1991, 130).² The relationship between the CEBG and the profession was, of course, beneficial for both as it strengthened the reputation and standing of landscape architects, giving them a firm place within the built environment professions, whilst also being advantageous for the CEBG. As John Sheail (1991, 122) summarized,

'the benefits of employing consultants extended beyond the individual sites in question. Such persons drew heavily on their commissions with the Board to give lectures to learned societies, or to write books in the course of their wider academic and professional interests. Although often critical on points of detail, no better way could have been devised for publicizing what the Board was trying to achieve.'

As an industry in public ownership, being involved in sometimes controversial decisions, the CEBG's and its consultants' expertise was regularly tested at public enquiries, leading to the development of a strong research agenda within the board as well. The Environmental Studies

Section became a leading authority in various fields of landscape-related research, from agricultural and arboricultural testing for tolerant species to be planted in pulverized fuel ash, to freshwater biological research. Hebblethwaite's aforementioned computational methods for landscape assessment laid the foundations for many of the advanced computational methods used widely today.

The Amenity Section – according to Sheail (1991, 141) – only meant that the CEGB had to take into account the effect of their proposals on the landscapes and ‘so long as the Board and Minister showed good faith in taking those considerations into account in their deliberations, it was for them to decide what weight to give them’. As this research proved, the CEGB's approach to amenity and the public's access to the landscape was key in their aim to have their schemes accepted. The ‘public relation value’ of these spaces was crucial. The increase in welfare provision through an extended programme of activities through sports, education or conservation was result of their reflective approach – a response to opportunities to involve the public even more in their activities, and create collaborative opportunities for conservation.

In 1990, the electricity industry was privatized in the UK and the CEGB dissolved. Coal-fired power stations are currently in the process of being decommissioned and the iconic structures are being quickly demolished across the country. Swenarton, Avermaete, and van den Heuvel (2014, 4) in their book about architecture and the Welfare State argued that

‘decisions about retention or demolition need to be informed not just by an understanding of the individual building or buildings [...] but by an understanding of the broader context within which they stood. If we are to assess their historical importance, we need to understand that history.’

Understanding the history, context and extent of landscapes provided by the Welfare State and its nationalized industries is key in this process. Pries and Qviström (2021) argued that the landscapes made by welfarist planning have proven difficult to ‘read’ and, therefore, are easily forgotten by custodians of ‘public memory’, which is true for the landscapes of power stations. While they held core facilities for community and educational use, they were designed to blend into the landscapes surrounding them and are often not even considered as ‘designed landscapes’ and therefore, taken for granted. By understanding the landscapes of power stations as part of the broader impact of welfarist planning in Britain, their history and significance can be better analysed, and their evaluation can be more nuanced. As the CEGB declared

‘the landscapes, created by ‘Capability’ Brown and Repton and the great landowners of the day, now stand in full maturity as a symbol of their confidence and foresight. Through its patronage the board looks to its landscape architects to design for efficient and economic estate management today, and by developing the traditions of the past, contribute to the landscape of the future’ (England and Savidge 1982, 29).

These ‘landscape of the future’ fostered social welfare, visual amenity, and conservation goals and contributed to building communities across the country. While the questions of environmental impact of the electricity industry is often mentioned through their contribution to the current climate crisis, their landscape legacy is yet to be fully understood.

Note

1. Simmons identified three factors, leisure time, affluence and mobility in determining the need for countryside recreation. Between 1953 and 1970, car ownership grew 4 times and numbers of participants in activities such as County Naturalists Trusts, Membership of the National Trust or the British Mountaineering Council also grew in a similar paste. Simmons (1975, 18–25).
2. The value of these contacts in 2022 would be £108,438.71 and £2,165,657.81, a nearly 22,5-fold increase.

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ORCID

Luca Csepely-Knorr  <http://orcid.org/0000-0003-1092-1447>

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