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The Logic of British Forest Policy, 1919-1970

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Summary

During the last 20 years British forestry has been heavily criticised by conservationists and environmentalists for the creation of monotonous forests dominated by non-native conifers. Foresters have been condemned for the forests they created and for having no apparent interest in the landscape, wildlife and the environment in general. It is, however, forgotten that these forests are the result of the demands of society for creating a strategic timber reserve and reinforcing the social fabric and economy of rural areas. To satisfy the demands of society foresters had to plant the poor land available for forestry. The physical conditions here defined to a large extent the appearance of the forests, being geometric in shape and monocultural. The use of conifers in monoculture plantations was reinforced during the 1960s when, under pressure of the Treasury and a developing domestic wood processing industry, the Forestry Commission was forced to become more efficient and economical. These pressures explain the extreme move to monoculture during the 1960s. This paper will try to show that the present criticism is the result of a forest policy that was dictated by economic, strategic, and social factors appropriate to the period they were in conceived as well as physical factors but that nevertheless environmental concerns played a role in the background.

In 1914 the total area of wood in Great Britain was about three million acres, of which one million were in Scotland. This represented 5% of Britain's total land area while in France it was 18% at that time (Acland Report 1918: 8). In Britain little attention had been paid to the growing of timber so that few of the woods were under economic management for the production of timber and still fewer fully stocked by the start of the First World War. The reason for this state of affairs was that the majority of Britain's timber was imported from abroad. Ninety percent of this timber consisted of softwoods that were chiefly imported from Scandinavia. Before the First World War the deplorable condition of Britain's forests caused alarm to those who made a study of the world's timber resources. They were convinced that a world-wide 'timber famine' was imminent and concerned that Britain could not reckon indefinitely on imports. Royal Commissions and Parliamentary Committees held several enquiries, but little was done.¹ World War I illuminated the bad state of British forestry and focused attention upon it. No one had foreseen what an important part timber was destined to play in modern warfare and what immense quantities the trenches would consume. During the war Britain was almost cut off from its timber resources due to the German naval blockade, and the results for Britain's forests were disastrous. The best stands of timber in Great Britain were felled and the total devastation amounted to half a million acres or one-sixth of the whole woodland of the country.²

Strategic and economic objectives

As a result of the timber shortages experienced during the war, a Forestry Subcommittee was added to the Reconstruction Committee to advise on policy when the war was over. The Subcommittee, better known as the Acland Committee, came to the conclusion that, in order to secure the double purpose of being able to be independent from foreign supplies for three years and a reasonable insurance against a timber famine, the woods of Great Britain should be gradually increased from three million acres to four and three quarter millions. The Subcommittee further advised that during the first ten years 150,000 acres should be planted by the state and 50,000 by private landowners with state assistance (Acland Report 1918: 4-5).

In 1919, as soon as the war was over, a body known as the Forestry Commission was established. Its mission was to acquire and afforest land and at the same time to assist public bodies and private

owners to plant trees and encourage forestry education and research. The increase of timber production was also intended to decrease the amount of money spent on timber imports, although this could only be a long-term objective. The main aim of the creation of a national timber reserve was a strategic one and that would remain the basis of British forest policy until 1957. In that year an *Enquiry into Forestry, Agriculture and Marginal Lands*, better known as the Zuckerman Report, was published. The conclusions of this report undermined the basis of the existing forest policy. The more influential conclusions were that end-users for forest products should be actively sought and that the strategic need for a three-year self-sufficiency of timber had disappeared with the advent of nuclear warfare (Zuckerman Report 1957). In December 1957, following the Zuckerman Report, an inter-departmental working party was set up by the Treasury to review the bases and objectives of the forestry programme in Britain. The outcome of this review was more radical than the Zuckerman Report and placed heavy emphasis on the commercial side of forestry. In an internal memorandum the working party concluded that ‘... the sort of social and location problems that would have looked relevant in 1910 or even 1930 would not necessarily make great sense now’.³ In their opinion the rate of return on capital invested in forestry should be the crux of future forest policy. The social aspects were not longer considered as a sound argument for investing money in forestry and attention and energy was to be devoted to the economic side of forestry. The Commission commercialised by applying short rotation species, mechanisation of operations and, in line with the Zuckerman Report, actively marketing of forest products to end-users. In this way forests were turned into “wood factories”. This mood was reflected at a symposium on natural resources held at the Royal Society of Edinburgh in October 1960, where James Macdonald, Deputy Director General of the Forestry Commission, recognised the need for a domestic woodprocessing industry to absorb forest products. The Government understood that the Forestry Commission needed an outlet for their products to enable them to make forestry profitable. It was therefore that in 1963 the Government decided to subsidise the construction of a large paper and pulp mill at Fort William in Scotland, but also in other parts of the United Kingdom new mills were set up. In 1967 Thames Board Mills’ opened a new pulpmill at Workington, in the Lake District, followed by the reopening of a chipboard plant at Thetford, East Anglia, to mention only a few examples.⁴ The emergence of a domestic forest product processing industry reinforced the need for single-species planting since manufacturers did not like to vary their chemical formulae, and they needed a cast-iron guarantee of supply (Mackay 1995: 35). This asked for a highly rationalised and mechanised forestry practice that

would make it possible to grow large quantities of timber in short rotations.⁵ The pressures from the treasury and wood processing industry resulted in the intensive planting of monocultures and by the mid-1960s the forests expanded at a rate of around 35,000 ha per annum.⁶ This rapid expansion was made possible by new techniques in forestry, especially mechanisation. This development started with the introduction of new cultivation techniques during the 1940s and 50s, which will be discussed in the section on ploughing.

Social objectives

The strategic and economic objectives that underlay British forest policy until the late 1950s are well known. Less known are the social objectives, such as the provision of rural employment and the creation of new rural communities, especially in the remote parts of Britain. These objectives predated the strategic argument and were used by proponents of forestry as the main arguments to urge state involvement in forestry. Before the Forestry Commission was established it was believed that many of the remoter upland areas of Britain experienced a steady exodus of people to the towns.⁷ Contemporary commentators warned that this would leave behind an ageing population, abandoned homesteads and villages, and a decline in the availability of social services such as schools and shops. This in turn would accelerate the drift from the land, and the countryside would slip into a vicious cycle of depopulation and decline (Matthews et al. 1972: 39-41). Among the people who were concerned about this development were a group of influential Scottish landowners who pressed for the creation of a state forestry agency. They saw the establishment of new forests as a means to stop the drift from the land by creating new jobs in forestry. John Stirling Maxwell, one of the original forestry Commissioners, wrote that ‘the importance of the industry is naturally greater in a country which contains so large a proportion of hill land and has so great a difficulty in retaining a population in the Highlands’ (Stirling Maxwell 1937).

John Stirling Maxwell, together with Lord Lovat, the Forestry Commission's first chairman, was among the most notable proponents of forestry. Reading Lovat's speeches makes clear that he related the question of forestry in Scotland to the question of land settlement and economy in the Highlands.⁸ In an address to the Glasgow Inverness-shire Association Lovat considered employment and social stability as the largest benefits of forestry in the Highlands. ‘Forestry’ he believed ‘was a line of work that was to make for a stable population in the country, and was to prevent undue

flocking of people in towns'.⁹ Lovat and other Scottish landowners were convinced that any forestry scheme had to maintain in decent comfort a larger number of people on the land. In their opinion afforestation offered the only large-scale solution to the difficulty of enabling the smallholder to supplement his living from the land. According to Lovat, afforestation would turn much unproductive land into productive areas that would be able to sustain a considerable number of families in the Highlands (Lindley 1935: 154-158; Davies 1979: 23).

The 50th anniversary of the Royal Scottish Arboricultural Society in 1911 was an opportunity for Lovat to use and increase his knowledge of forestry in the Highlands. To commemorate its anniversary the Arboricultural Society decided to sponsor and publish a forest survey of the Highlands. The purpose of the survey was to show that the Highlands would be suitable for forestry and its probable effect on other rural activities, the rural economy, and employment if the land were brought under wood. The task of the survey was entrusted to Captain Archibald Stirling of Keir, a big landowner in the South of Scotland, Lord Lovat, and Colonel Bailey, a retired Indian forester who edited the Society's Transactions. The area chosen for the survey was the Great Glen, in which Loch Ness is situated. The reason why this area was used for the survey was that the Glen represented both east and west coast conditions and contained all the typical social and physical elements of the Highlands such as crofters, extensive sheep farming, soil and climate, deer forests, grouse moors and old estate forests. The survey concluded that there existed a large extent of land suitable for forestry in Scotland and that this land could be afforested under a well-framed scheme. It suggested further that afforestation would eventually bring a considerable economic return and that the establishment of forests would create extra employment in the Highlands (Lindley 1935: 161-163).

These recommendations were taken over by the Acland Committee, of which Lovat was a member. In its final report the Committee gave an eloquent exposition of the social and economic benefits of afforestation such as rural employment and how forestry would contribute to the Highland economy. In their opinion the creation of smallholdings by a new state forestry agency would be a cornerstone to repopulate the land and to acquire enough labour to carry out the massive planting programme. They envisaged that 'the small holdings will be grouped together on the best land within or near the forests so as to economise labour in the working of the holdings, ... and to provide an ample supply

of ... labour for [forestry] work. Families settled on new holdings in forest areas will be a net addition to the resident rural population' (Acland Report 1918: 28).

Worker's holdings

Although the recommendations of the Acland Report suggest that the systematic establishment of workers' holdings should be part of any afforestation scheme, the Forestry Commission did not adopt it until 1924. This scheme included the construction of houses with not more than 10 acres of agricultural land in or near a forest. The occupier was guaranteed a yearly minimum of 150 days' work in the forest; the remainder of his time could be used for working the land of his holding or for additional forest work. According to a 1943 report by the Forestry Commission this forest holding scheme was 'from 1924 to 1931 a scheme of land settlement' (Forestry Commission 1943: 42).

After the economic crisis of 1931 this aspect receded into the background and the creation of new holdings was restricted to the areas where it was essential to the planting and tending of the forests. In spite of this the Commission had by 1935 managed to create 1250 holdings, and the number gradually increased until 1939 when there were 1470 (Forestry Commission 1950: 71).

But this total was not enough. By 1943 the Forestry Commission concluded in its report on post-war policy that 'at present there is a shortage of 2000 cottages' (Forestry Commission 1943: 42).

Therefore the Commission launched a major construction programme after the war and most of the new houses were built in so called forest villages. These villages were of a different kind from the smallholdings that were created before the war. The villages were created to house Forestry Commission staff in or near the forests where they worked and they did not include agricultural ground. In their Annual Report of 1959 the Forestry Commission gave an optimistic account of the development of a forest village in the west of Scotland to show the success of the villages in arresting the drift from the land and enhancing the social fabric of the countryside:

For example, to provide a stable labour force for the forest of Inverliever beside Loch Awe in Argyll, a new forest village, now of 47 houses, has been built at Dalavich. In 1908, when there was no forestry activity there, the resident population of this area was 55, of whom only 11 were children under the age of 16. The population is now 318; there are over 125 schoolchildren, for whom the County Council has built a new school in the village (Forestry Commission 1960: 7).

In retrospect we can conclude that this was only a temporary development. From the early 1960s the number of forest worker's houses and holdings started gradually to decline because the

Commission started to sell redundant houses. This development can be attributed to the declining workforce of the Forestry Commission due to the mechanisation of forestry operations (see figure 1). This trend has continued up to the present day.

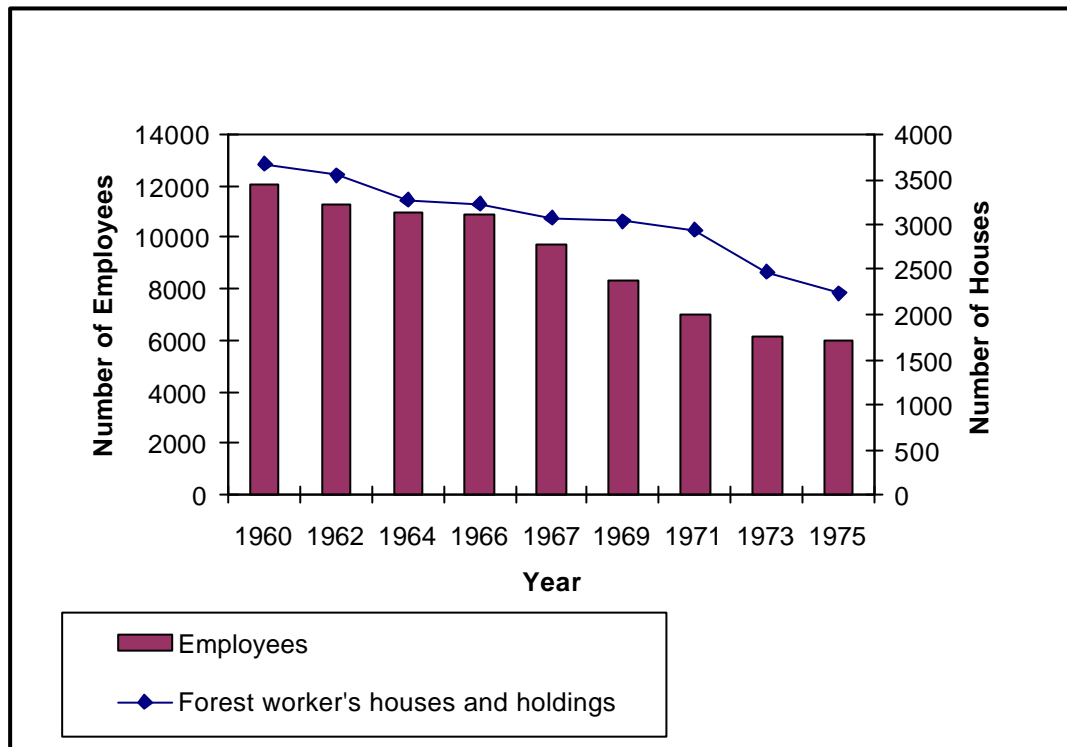


Figure 1: Forestry Commission Employees and Houses, 1960-1975.

(Source: *Forestry Commission Annual Reports*)

Nevertheless, the picture of thriving forest villages was very attractive to many councils in the Highlands of Scotland and other remote areas of Britain. In the summer of 1959 the county of Sutherland's planning committee was heavily disappointed when the Forestry Commission decided not to proceed with a planting programme in north-west Sutherland. The *Glasgow Herald* reported that the authorities in Sutherland were assured by the Secretary of State for Scotland 'that forestry would be a major industry in Sutherland'.¹⁰ The Sutherland County Council got the feeling that the Forestry Commission was letting them down and they had been misled about the possibilities of creating employment through forestry. They had, on the advice of the Forestry Commission, constructed houses for forest workers but it turned out that this all had been in vain.

The employment argument remained strong in Forestry Commission cycles and among the general public throughout the 1960s, although the numbers of people employed by the Forestry Commission

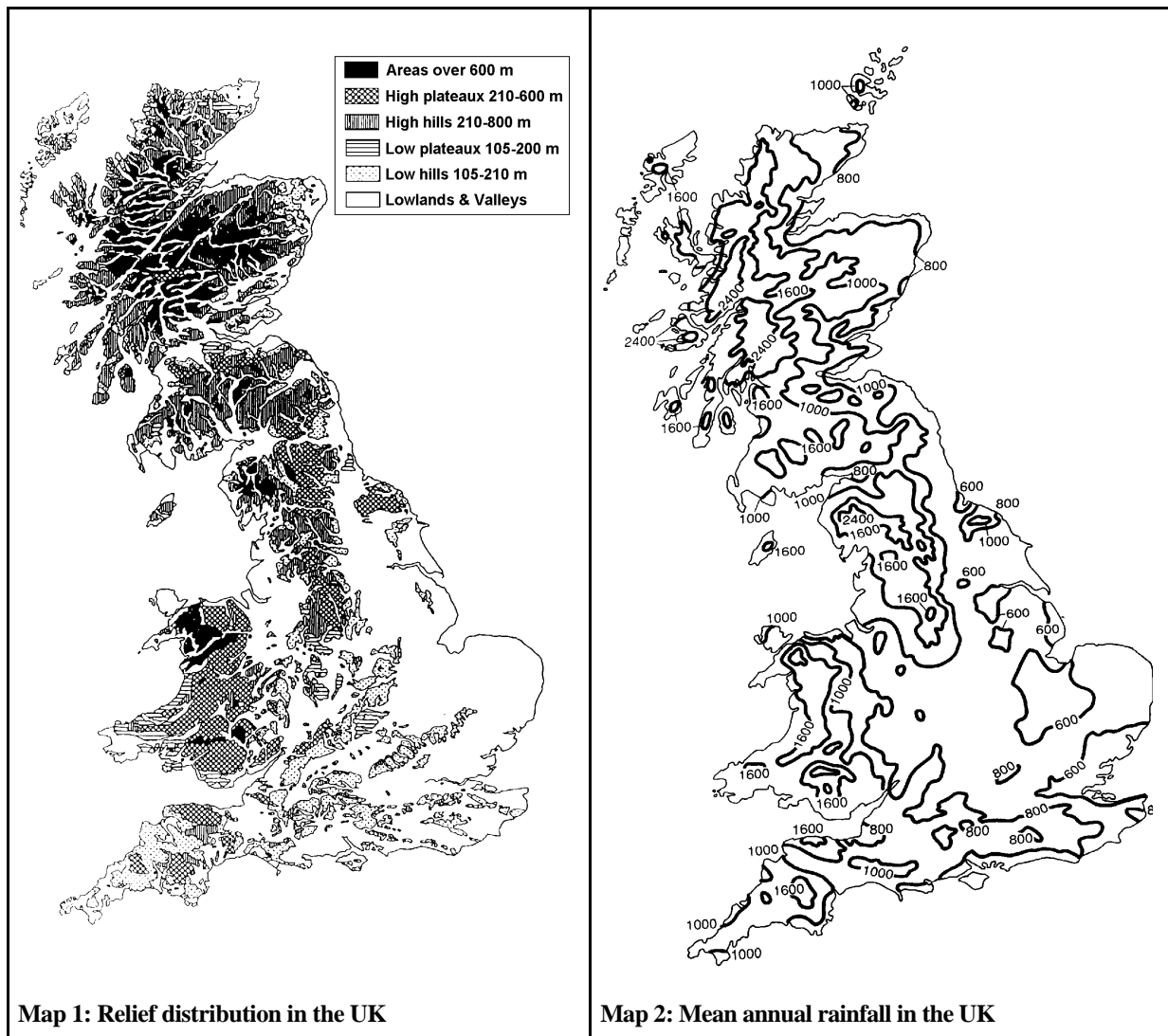
were falling. In January 1966 the *Oban Times* discussed in a major article the benefits of the expansion of forestry activity as presented in a Government paper on 'The Scottish Economy, 1965-70'. The newspaper reported enthusiastically that 'forestry is likely to provide further sources of employment' because the Government had decided to increase the Forestry Commission's planting programme in Scotland considerably.¹¹ The employment was not expected to be found in forestry itself, but in the industries that would process the home grown timber that was increasingly harvested from the maturing forests. As said before, British wood processing industry was rapidly expanding during the 1960s. The extra planting was only meant to sustain the flow of raw materials to feed these industries. This development fitted neatly with the demands from the government to make forestry a more commercially viable undertaking.

Physical conditions

To fulfil the strategic, social and economic objectives of British forest policy the Forestry Commission had to plant extensive areas. Here, however, they were faced with a serious problem: the best land was in use for agriculture. The consequence of this was that foresters were forced uphill into the less fertile moor and heath lands. These areas are nowadays considered as valuable habitats for wild life and plant communities but during most of the 20th century they were seen as wastelands that had to be reclaimed and made productive. The physical conditions that foresters encountered here defined to a large extent the appearance of Britain's forests. The conditions on the poor upland sites are determined by four physical factors: elevation, rainfall, soils and exposure.

If one looks at a relief map of the United Kingdom it can immediately be observed that most of the high and mountainous ground can be found in Scotland and to a lesser extent in Wales and north England (map1). The highest mountains are situated in the west of Scotland and on the Cairngorm plateaux of the central Highlands, in the Pennine chain in England and in the west of Wales. As more than half of the land available for forestry was situated in Scotland we will focus upon the physical conditions in this part of the UK. The relief of Scotland tilts roughly from the north-east to the south-west, with the highest mountains in the north and west and the rolling agricultural lands in the south and east. This relief distribution is also reflected in the annual rainfall pattern with the highest figures in the west and falling towards the east (map 2). This is caused by the fact that the mountains in the

west catch most of the rain that comes with the prevailing western winds from the Atlantic in the west (Goudie & Brunsden 1994: 20, 60).



It is no coincidence that the general soil distribution in Scotland follows roughly the relief and rainfall pattern. The soils in the western Highlands are influenced to a large extent by climate, especially temperature and rainfall. The low temperatures and waterlogged conditions means that organic material decomposes so slowly that it can accumulate in thick layers to form peat (Withow 1984: 389-90). Most of the upland and low waterlogged areas of the west Highlands are covered with peat. In the central Highlands the same conditions exist on elevated slopes and high plateaux. These grounds are hardly of any value for forestry.

To the east of the main Scottish mountain mass lie the upland heaths which are usually treeless and situated on podzolised compact soils with a thin layer of raw humus, and typically with a thin iron

pan. These soils are fertile when properly drained and ploughed to break the ironpan, which is impermeable to water and inhibiting to root penetration.

In all regions wind exposure is a limiting factor for both agriculture and forestry. Because of the dominance of western winds the West Coast is most vulnerable to strong winds but high slopes and mountain summits are also windy places (Goudie & Brunsden 1994: 90-95; Meteorological Office 1979: 20).

Tree species and ploughing

For most trees the elevated, wet and exposed conditions as well as the poor soils are difficult conditions to grow under. The result of this was that the number of trees available for successful afforestation on these sites was limited and included mainly conifers. The most important, among others, were Scots pine, sitka spruce and Norway spruce. Sitka spruce especially became a widely planted tree after the Second World War, a choice that had a profound impact on the shape of British forestry. From the late 1920s it was realised that sitka spruce was a tough tree that was easy to establish and hard to kill, and it was regarded as the most suitable tree for growing on the wet upland parts of Scotland. Sitka spruce is highly productive, tolerant to high levels of wind exposure, and it grows well on a wide variety of sites such as drained peats and gley soils but grows best on well-drained deep soils in suitable high rainfall areas. Although the tree looks superior to other trees it had a few problems that prevented it from becoming the dominant species before the Second World War. Like Norway Spruce and some other conifers, Sitka hardly grows in competition with heather unless the heather is killed or enough fertiliser is added so that it can outgrow the heather. It was only after the introduction of better fertiliser techniques and ploughing that these problems were overcome. To give the young trees a kick-start to outgrow the heather, fertiliser was added before ploughing the ground so that it was ploughed into the soil. The development of better site preparation techniques had probably the biggest impact on the development of forestry practice in the United Kingdom. The Forestry Commission experimented from the early 1920s with ploughing as a means of site preparation. This research showed the advantages of the use of ploughs such as the draining of the soil and the improvement of soils by allowing air into it and the release of nutrients. The problem, however, was that horse-drawn ploughs were not strong enough to plough deep enough to break the iron pans and not fast enough to make it practical for large-scale operations. It was only by the early 1940s that stronger ploughs became available which, combined with more powerful

tractors, made large-scale mechanical cultivation economically feasible by the end of the Second World War (Davies 1979: 34; Avery & Roderick 1990: 50-51). By the early 1950s ploughing for drainage and cultivation was an established practice in the Forestry Commission and by 1970 the Forestry Commission ploughed at least 70 per cent of the annual afforested area (Wood 1974: 68).

The coincidence of the demand for large quantities of conifers by the domestic wood processing industry, exotic conifers, and ploughing gave a great impetus to afforestation in Britain and especially Scotland. This development had a profound impact on the appearance of the new plantations in the landscape. Ploughing proved to be an effective technique to prepare land on a large scale, but the long straight plough lines made for rows of lining trees led critics to speak of 'regiments of conifers' or 'blanket forest'. The easiest way to plough was in geometric shapes but this created blocks of conifers that seemed out of place and the dense planting of a single species enhanced the impression of a dark impenetrable forest with low diversity

Public debate

It was exactly these monotonous plantations that aroused the opposition to commercial forestry during the last three decades. Before that period hardly any voices were raised against afforestation of the upland heaths and peatlands. The exception was the Lake District because the landscape there is regarded as a national asset. When the operations of the Forestry Commission threatened to change the appearance of the Lake District it provoked a public outcry. But in general public opinion was in favour of afforestation because it provided employment in remote rural areas and created a timber reserve for times of a national emergency. The latter argument to press for more forests is the understandable reaction of people who experienced the shortages of food, construction material and fuel during two World Wars. Newspapers such as *The Times* reported on a regular basis on the progress of forestry in Britain and published the figures of acreage acquired and planted by the Forestry Commission. Members of the House of Commons also showed a keen interest in the progress made by the Forestry Commission and asked on a regular basis about 'the intentions of the Government with regard to afforestation; and how many acres it is proposed to plant during the present year?'¹²

Politicians and newspapers were not only interested in the progress of the forestry programme but also in the question of rural employment and more in particular the Commission's workers' holdings programme. Members of Parliament requested information about 'what land has been taken for smallholdings in South Wales; what the acreage and where situated; what the number of men is employed; and what number is likely to be employed within the next three years?'¹³ Until the Second World War they regularly pressured the Forestry Commission to increase their efforts to provide more workers' holdings.

The question of whether forestry would create more jobs in rural area was also an important issue for the general public, as we have seen before with the reaction of the Sutherland County Council and the discussion in the *Oban Times*. The same newspaper reported in 1946 that 'it is estimated officially that the proposed forestry work in the Highlands will support a population of 1100 workers actually employed and 4000 men in industries using wood for their raw materials'.¹⁴ But not everybody was convinced that forestry would bring more jobs. A good example were sheep farmers in Argyll who feared that forestry activities would result in the loss of pasture and drive them from the land.

Environmental concern

While public debate was almost entirely concerned with the social, economic and strategic issues of forestry, foresters did show concern for environmental issues as they saw them. Prominent foresters stressed in professional forestry journals the importance of having regard for landscape values and amenity and the protection of birds and wild flowers when creating new forests. The most visible of these impacts are the changes in the landscape that come with the planting and harvesting of the forests. There is a sense of loss when a familiar landscape is transformed by forestry operations such as afforestation and the harvesting of trees. It is for this reason that the visible impact of forestry sparked off the earliest debates about aesthetics and amenity in relation to afforestation.

The discussion about the visible impact started immediately after the Forestry Commission was established, almost before the first trees had got into the ground. In 1920 an article by

John Parkings, a member of the Linnean Society and an accomplished botanist, warned about the effect that large single species plantations would have on the landscape:

To plant pure is a sound silvicultural maxim. To follow this out to the letter will result in plantations of a severe type - largely consisting of rectangular areas of a single species of conifer.

He predicted that the result would be

A closely grouped mass of trees of the same kind and pattern with no relief to cheer the eye (Perkins 1920: 255).

This article set the tune for the discussion about the impact of forestry on the landscape in the decades that followed. And indeed, as soon as the new plantations made their first impression on the landscape some criticism was heard about their disturbing effects on the landscape. And the criticism came not least from an unexpected group of people: foresters themselves. In the mid-1930s Lord Clinton, one of the original Commissioners and former Chairman of the Forestry Commission, wrote about forestry and landscaping that ‘one really valid objection to modern planting from the artistic point of view is the hard margins and rectangular figure which are generally adopted in the layout’ (Clinton 1936: 200).

To prevent hard margins and straight lines Lord Clinton proposed to plant or regenerate several species that differ in colour, shape and size in irregular patterns at the boundaries of plantations to ‘disguise any straightness in outline or sharpness in angle’ (Clinton 1936: 200). This was written thirty years before the Forestry Commission appointed a landscape consultant to advise the Commission on how to fit new plantations organically into the landscape.

At the time that Lord Clinton wrote, the Forestry Commission did not adopt his ideas. During the last year of the Second World War the idea of fitting forests organically into the landscape surfaced again in an article published in the *Scottish Forestry Journal*. Arthur Geddes argued in his article ‘Landscape and Ecology in Relation to Afforestation’, that the utilitarian ideas of forestry with their straight-line boundaries and uniform plantations were a mistaken philosophy. He argued in favour of the adaptation of a forestry practice that matched tree species to the site. Experience at Inverliever Forest in Scotland had shown that uniform plantations were not uniform any more after ten years due to local differences in site

conditions. Almost every block showed variable growth and some blocks simply died. A few years later, a new planting method had been worked out which consisted in noting the main plant communities and planting on that patch the tree that grew best where that particular plant community is found. The application of this method led to the creation of mixed woods and curved lines, not by means of planting but by using ecological principles which allowed nature to do the landscaping (Geddes 1944).

On a local level foresters experimented with this technique, for example in Strathyre where the local forester in charge, Alasdair Cameron, planted trees according to the site during the 1950s. The topography and soils in Strathyre is complex, the soils vary markedly from place to place, as does the vegetation that is supported by it. It is for this reason that the foresters have followed this natural pattern of variation in order to create a varied looking forest. This pattern, and the use of irregular edges of the plantation, showed that the appearance of plantations could be made more in tune with the rest of the landscape (Forestry Commission 1951: 5-6). It is interesting to note that the Forestry Commission realised during the late 1950s that the general public took a much greater interest in the natural landscape than ever before. It must be said that the Commission was ahead of its time when Barrington, an English conservator of the Commission, wrote in 1957 that 'what we must do is so to design these new forests that they fit in the scenery' (Barrington 1957: 225). This remained no hollow statement because the Commission appointed Silvia Crowe as a landscape consultant in 1963 to advise how new plantations could be fit organically into the landscape. Although Crowe's work is criticised as being only a 'cosmetic exercise' (Gerber 1997: 164) it was the start of an education process that would ultimately make foresters aware of the demands of modern nature conservation. However, that did not mean that they had not been at all interested in nature conservation and environmental issues in the period predating the 1970s.

Wildlife and conservation

The famous Scottish ecologist, Frank Fraser Darling, described the upland moors and peatlands, in a vivid phrase a 'wet desert' and was convinced that these areas had to be reclaimed for the recreation of the forests that had once thrived there. If that could not be done through natural regeneration than it had to be done in an artificial way, although the main purpose of this would be the production of

timber. Frank Fraser Darling was convinced that these forests would increase the biodiversity in the Highlands and it was for this reason that he regarded the work of the Forestry Commission as important and valuable (Fraser Darling & Boyd 1964: 66, 69-70, 73-74; Smout 1993: 9). In the 1969 BBC Reith Lectures he praised the Commission by saying that 'it preceded state action in establishing its own National Forest Parks, which in Scotland have to make do for the National parks that country has been denied. Further, in the last twenty years the Commission has planted its new forests with much more ecological awareness, using different species' (Fraser Darling 1969: 67).

It seems a correct observation that the attitude of the Forestry Commission towards conservation issues changed over time. Just after World War I the Commission started as an organisation set up to create forest plantations and grow poles of timber. But the Forestry Commission started to change from within. Many foresters had gone into forestry not only because they wanted to plant and tend trees but also because they had a general interest in natural history. On forest level there were foresters studying the wildlife of their forests. In Perthshire there was, for instance, Donald Macaskill who studied and recorded little mammals and birds living in the forests under his care. He was a keen naturalist who published books on wildlife and birds.¹⁵ Another forester, John Davies, recalled the observation of wild cats in the Central Belt and pine martens in the Great Glen where they had been absent for a long time. He wrote about the wild cat: 'I well remember the excitement we felt in the 1960s when we found them breeding in Carron Valley Forest, outside Falkirk. I have no doubt they will continue to move south' (Davies 1979: 52). He attributed the spread of this and other animals to the expansion of the forests since 1919 and he was convinced that this process would continue with the creation of new forests.

The interest in the ecological and wildlife aspect of the forests is not confined to the post-war period or to active foresters of the Forestry Commission. Ideas of environmentally sensitive forestry, or, as it was known in the inter-war years, forestry on natural lines, were common throughout the 1930s and after the war. The best known representative of this forestry ethic was Mark Anderson, professor of forestry in Edinburgh and former research officer of the Forestry Commission. Anderson's outlook on forests was what we nowadays call holistic. He described forests in a radio talk as 'extremely complex associations of organisms, living in a delicate balanced harmony, amongst

which the trees are merely the most conspicuous components'.¹⁶ He saw the forests as 'living communities'. Among present day environmentalists Anderson is heralded as a prophet crying in the wilderness and who was far ahead of his times.

However, Anderson's ideas were not as unique for the period during which he was writing. Anderson was a man of his time and shared his ideas of forestry on an ecological basis with many other foresters. For example: H. L. Edlin, publication officer of the Forestry Commission in the post-war years, and W. H. Rowe, a forester from Oxford, both wrote about forestry on an ecological basis. In 1947 Rowe wrote in his book, *Our Forests*, that forests are 'a living community throbbing with life'. He continued: 'For here, indeed, is a colony of individuals - plants, trees and animals, co-existing in a communal life' (Rowe 1947: 11). The fact that Anderson is hardly recognised as a man of his times at the present is due to the rational system of forestry economics that was introduced after the Zuckerman report in the 1960s. The forests created under this system give the impression that foresters fully backed this development. The reality is that many foresters had their doubts about the creation of large scale monocultures for the mass production of wood. They saw the forests not as mere timber factories but as an integral part of the landscape, 'like threads in the web of its carpet of living green' (Edlin: 1947). To preserve this, Rowe propagated the use of mixed woods and natural regeneration to avoid monotonous forests planted in straight lines and geometric patterns: 'The new forests need not become monotonous blobs obscuring a favourite view or marring a familiar landscape' (Rowe 1947: 23). Finally Dr. Mutch, a forester trained during the war years and former lecturer at the University of Edinburgh, said in an interview that 'the big scale was a totally mistaken philosophy'.¹⁷ And he stood not alone with his opinion.

An important step towards the modern appreciation of the native and natural woodlands in Britain was the publication of *The Native Pinewoods of Scotland* by Prof. H.M. Steven and Dr. A. Carlisle in 1959.¹⁸ This book discussed the native pinewoods from a historical, ecological and forestry point of view. According to Steven and Carlisle the natural pinewoods of Scotland have an important ecological function as a habitat that contained its 'own distinctive plants and animals, some of which are rarely found elsewhere in Britain' (Steven & Carlisle 1959: v). Steven and Carlisle saw the practice of natural regeneration as the best method to preserve, expand and perpetuate the native pinewoods of Scotland. The merit of Steven and Carlisle is that they placed the conservation and

natural regeneration of the remnants of semi natural, native pinewoods on the political and forestry agendas. It was, however more than 20 years later that the importance of semi natural and native pinewoods was fully appreciated.¹⁹

Concluding remarks

I have been trying to show in this paper that the regimented monocultural forest plantations visible at the present are the result of a forest policy dictated by the demands of society. It is ironic that this same society is now rejecting the product of this policy and condemning foresters for it instead of looking at society as a whole. It is true that foresters managed to devise techniques to plant the almost unplatable land available for forestry and that they did this without much concern for the consequences. The Forestry Commission was set up to create and manage a natural resource and not to build a national park system. It is an ironic contradiction that the Forestry Commission created national forest parks long before the government established the first national park. Foresters were often aware of and concerned with environmental issues, as they saw them, but public debate was almost entirely concerned with issues such as a strategic timber reserve and the possibilities of creating employment. By the 1960s, under pressure of the Treasury and a growing domestic wood processing industry, British forestry moved towards a highly mechanised form of forestry dominated by monocultures. The introduction of a rational system of forestry economics in the 1960s had a profound environmental impact on the landscape and works like a distorting lens, obscuring the fact that foresters were among the forerunners of nature conservation. Nevertheless, the tradition of environmentally sensitive forestry survived throughout the 1960s and 1970s due to the deep-rooted interest in wild life and ecology shared by many foresters. The recent reawakening of the interest in the native and natural forests of Britain can now be recognised as a long-standing forestry tradition.

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Notes

¹ Two Committees that recommended the adoption of a national forest policy were the Select Committee on Crown Forests of 1849 and the Royal Commission on Coast Erosion and afforestation that reported in 1909.

² Records of the Maxwells of Pollok, City Archives Glasgow, T-PM 122/4 Lectures and articles, 7/2 BBC forestry talk no. 2, 29 March 1928. See also: Acland Report, *Final Report of the Forestry Sub-committee*, p. 5.

³ Memorandum by the working party on forestry policy, 16 December 1957. Public Record Office, Treasury files, T224/234 Forestry; general policy, 1945-1958.

⁴ Forestry Commission, Annual Report of the Forestry Commissioners, 1964, 1965, 1966, 1967-69, 1970-71.

⁵ A rotation is the time that between planting and harvesting of a forest.

⁶ Forestry Commission, *Annual Report of the Forestry Commissioners*, 1964, 1965, 1966.

⁷ Contrary to popular belief, census data of the rural parts of Scotland show that the population remained at a high level until World War II. Only in the very remote north did the population decline considerably between 1881 and 1921. For a more detailed discussion See: Flinn, Michael (ed.) 1977: *Scottish Population History From the 17th Century to the 1930s*, Cambridge, pp. 306-307.

⁸ See Lovat's speech: House of Lords debates, 1909, Vol. 2 529, Crofting Parishes Bill, 15 July 1909.

⁹ 'The Glasgow Inverness-shire Association Diamond Jubilee. Lord Lovat in the Chair', *The Oban Times*, 12 February 1927.

¹⁰ 'Forestry in Sutherland', In: *Glasgow Herald*, 25 June 1959.

¹¹ 'More forestry planting. - State plan 6000 extra acres per year'. In: *The Oban Times*, 27 January 1966.

¹² House of Commons, *Parliamentary debates*, [180] 1329. Written Answers, 19 Feb. 1925.

See also: House of Commons, *Parliamentary debates*, [200] 2288. 9 December 1926; [311] 568. Written Answers 27 April 1936.

¹³ House of Commons, *Parliamentary debates* [307] 1971. Written answers 19 December 1935.

See also: House of Commons, *Parliamentary debates*, [200] 2288. 9 December 1926; [311] 567. Written Answers 27 April 1936; [330] 197-198 Oral Answers, 7 December 1937.

¹⁴ 'Forestry and Woodland', *The Oban Times*, 17 August 1946.

¹⁵ Personal comment by Mr. F.T. Donald, retired forest officer Forestry Commission. Other foresters that were interviewed told that similar motivations played a considerable role in becoming a forester.

¹⁶ Time for Forestry. Broadcast talk by Professor M. L. Anderson on Monday, 2 January 1956, University of Edinburgh Special Collections, GEN 1971/6.

¹⁷ Interview Dr. William E.S. Mutch, 12 August 1998, at his home in Edinburgh.

¹⁸ Professor Steven was a research officer of the forestry Commission before becoming Professor in Forestry in Aberdeen. Dr. Carlisle worked at the time at the University of Aberdeen as a Postgraduate and the book is partly based on his Ph.D. thesis.

¹⁹ There is a debate going on about the question of what native Scottish Pinewoods are. Do these woods consist of genetically 'pure' Scots Pine, grown in Scotland and not 'contaminated' by pines from elsewhere? At this place there is no space to discuss this problem.

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