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EUROPEAN COMMITTEE FOR THE CONSERVATION OF

NATURE AND NATURAL RESOURCES

LÜNEBURG HEATH NATURE RESERVE (FEDERAL REPUBLIC OF GERMANY)

> On-the-spot appraisal by

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1. LEGAL STATUS OF THE RESERVE

Since the time has come to consider the question of renewing the European Diploma awarded to the Lüneburg Heath Nature Reserve (Naturwchutzgebiet - NSG - Lüneburger Heide), it seems appropriate to recall the Reserve's legal status. Established by the German state in 1921 for the purpose of conserving a representative area of the Lüneburg region's extensive heathlands, it comprises 20,000 hectares of pastoral heathland, forest and fields, with a few hamlets and isolated farmsteads whose traditional architecture has been preserved.

Although in theory the responsibility of the local regional nature protection authorities, the Reserve's day-to-day management is entrusted to various bodies acting on behalf of the owners of the property, namely:

- the <u>Verein Naturschutz Park</u> (VNP) which manages approximately 5,000 hectares of heathland and pastures, 1,500 hectares of which were, however, put at the disposal of the British Government and NATO for tank manoeuvres;
- the <u>Forestry Commission</u> of Lower Saxony, which manages the 5,700 hectares of state forests and the 2,000 hectares of forest belonging to Soltau Monastery;
- 3. an association of farmers whose land is located within the Reserve (6,400 hectares).

Each of these bodies is reponsible for a spcific geographical area, but their co-operation is required to enable the Reserve's major objective to be attained, namely the conservation of natural, archeological and landscape features in accordance with the Decree of 3 January 1922 and the Act of 26 June 1935. The regulations provide for consultation of the Verein Naturschutz Park (VNP), currently based in Hamburg.

2. STATE OF CONSERVATION OF FLORA AND FAUNA AND LANDSCAPE

There have been no adverse developments since the last on-the-spot appraisal, carried out by Mr Plattner in 1976.

The forestry services of the state and Soltau Monastery have continued to manage the existing conifer plantations (Scotch pine, spruce and larch) along commercial lines.

The VNP has continued with a very costly but highly successful conservation policy, which may be summarised as follows:

- heathland maintenance by the grazing of 9 flocks of about 350 sheep each to ensure constant regeneration of the heather (1 ewe per hectare of heath);
- mowing of the heather by rotary cutter in areas where grazing is insufficient for its rejuvenation;

manual removal (felling) of birches and pines spread to the heathland by wind dispersal;

reconstitution of heathland in the wooded areas purchased by the VNP, adjacent to areas of heathland;

substitution of deciduous trees (beech and oak) for conifers in the parts of the peripheral wooded area belonging to the VNP.

These measures guarantee the conservation and ecological enhancement of the land managed by the VNP. The changes which have occurred in recent years (temporary spread of wavy hair grass, increase in the number of birds of prey, decrease in the number of black grouse) are to be attributed to natural fluctuations and not to errors of management.

The VNP has also recently taken two very important measures for wildlife conservation:

 the purchase of an extensive peat-bog - the Pietzmoor (250 hectares) close to the edge of the Reserve, where work on the old artificial drainage system is recreating stretches of water and open spaces here and there, which are now being frequented by various species of duck, black storks and cranes;

ecological development of the Wehlen valley (heathland, peat-bogs, myrica thickets, alder groves) and the Raderbach wetlands (meadows, myrica gale thickets), in which the short-eared owl nests.

ARRANGEMENTS FOR RECEIVING THE PUBLIC

The Reserve continues to receive a very large number of visitors (4 million each year), who find ample accommodation (20,000 beds) in the neighbouring villages. The VNP carefully maintains the 400 km of footpaths and 200 km of riding tracks, the latter being limited to the peripheral wooded area. It arranges for the periodical emptying of some 2,000 litter bins (cost: 150,000 DM each year).

The footpaths avoid the sensitive areas and are sufficient to channel all the Reserve's visitors, whose behaviour is highly satisfactory. There is no sign of any damage caused by reprehensible conduct on the part of visitors.

The VNP has made a great effort in the past two years to provide information for visitors to the Reserve and has opened two centres for this purpose. An original experiment is being carried out there: an annual exhibition on some historical or biological theme together with an itinerary illustrating the theme in the field. This is a promising innovation and deserves to be continued.

. BUDGET

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Each year the VNP assigns an <u>operating</u> budget of 2,500,000 DM for the upkeep and conservation of the heathland landscape; the Länder of Hamburg, Hanover and Bremen also contribute to this budget (approximately 50,000 DM). The Head Forester, Mr H Lux, is employed on a full-time basis and discharges his duties with great skill and energy; he is assisted by a team of workmen.

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The annual <u>investment</u> budget amounts to 2,000,000 DM on average and is provided exclusively by the VNP. It is used for the upkeep of the heath, buildings and sheep-folds and for the purchase of new properties (wasteland, wetland areas, wooded land, derelict buildings and farmland), averaging 50 hectares each year.

The expenditure of the state and monastery forestry services is not included in these figures, but is undoubtedly offset by the revenue from the forests which they manage.

5. SCEINTIFIC RESEARCH

There have been two important developments since 1976. Firstly, a wellknown ecologist, Prof. Preising, former Director of the Lower Saxony Nature Conservation Department, was co-opted on to the VNP's Board of Management. Prof. Preising is also in charge of a study on the load tolerance of the vegetation and soil in the area (grant from the Government of Lower Saxony).

Secondly, the VNP has recently purchased the 250 hectare Möhr estate adjoining the Reserve. It plans to set up an ecological and pedagogical research centre with a team of nature conservation specialists, where it will be possible to study at first hand the problems involved in the conservation of heathlands and peat-bogs, local hydrobiology and ornithology, and ecological alternatives in agriculture. The archives of the late Prof. Tüxen, who enjoyed an international reputation, will probably be transferred to this centre.

Lastly, it should be noted that the Faculty of Veterinary Medicine of Hanover University is carrying out a study of the black grouse and its diseases.

If the Möhr centre realises the ambitions of its promoter, Dr. A Toepfer, it will undoubtedly be of Europe-wide significance, since the Lüneburg Heath Nature Reserve is the only large-scale relict of the vast heathlands which once covered north-west Europe from Flanders to Jutland.

6. SPECIAL PROBLEMS AND DIFFICULTIES

However much goodwill and expertise the VNP puts into the management and conservation of the NSG Lüneburger Heide, the Reserve faces a number of problems which could jeopardise its future in one way or another if the authorities were to withdraw their support.

6.1 Military training ground

The problem is not new and has been mentioned in all the previous reports. The European Diploma states expressly that the land used for military purposes is excluded from its protection despite the fact that it is legally a part of the Reserve according to the latter's statute. For the purposes of this report we merely wish to point out that the impact of the military manoeuvres on the Reserve is especially noticeable and regrettable in the Tütsberg area, the closest to what might be called the "heart" of the Reserve, ie its complex of old juniper heaths. At this point the agricultural land and buildings belonging to the three farms of Tütsberg, Wulfsberg and Benningshöfen cut across the training grounds. The responsible authorities should consider re-negotiating the boundaries of the military land in this area with a view to returning to the Reserve certain areas adjoining the present heathlands. In places where the soil has been ploughed up by the tanks it is still possible to reconstitute the heath in three or four years as long as the humus-bearing stratum, albeit crushed, is still present. It would be a different matter, if, in the long term, the humus-bearing layer were eroded exposing the virgin and mostly infertile mineral soil beneath.

6.2 Extraction of drinking water

The city of Hambourg has built a water-works not far from the edge of the Reserve. It is too early to judge what effects the extraction of groundwater will have on the surface water in the valleys and dales, and there are conflicting views on the subject. Not until hydrostatic measurements have been completed will it be possible to judge the real impact of these pumping operations on the hydrology of the valleys and take appropriate measures to protect representative biotopes.

6.3 Petroleum prospecting

The company Deutsche Mobil Oil AG has received permission from the Government of Lower Saxony to carry out seismographic surveys to detect the presence of natural gas or petroleum deposits. The permit covers a wide area, including the NSG, but owing to an appeal by the VNP, no borings have been made yet as far as we know.

Seismographic surveys do no damage to the environment. However, Mobil Oil would be obliged to work any deposits it discovered. If drilling equipment had to be set up in the NSG itself, the European Diploma would have to be withdrawn.

6.4 Need for integrated management

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As we mentioned above, management of the NSG is divided up according to categories of property. However, as the Reserve is defined in its statute as a single protected entity there should be more consultation on its management among those in charge. We feel, therefore, that the nature conservation authorities should act promptly to secure genuine co-operation among the various managing bodies with a view to co-ordinating their action and bringing it as far as possible into line with the aims set out in the Reserve's statute.

With the experience it has acquired and the management practice which has prevailed since its foundation, the Lüneburg Heath Nature Reserve pursues three major objectives:

1. conservation of the heath's agro-historical landscapes;

protection of flora and fauna and their habitats;

3. conservation of the indigenous sheep breed of the north-west European heathlands, the "Heidschnucken".

These three objectives have specific implications.

1. <u>Conservation of the landscape</u> involves remodelling its structure to some extent, and this according to contour lines rather than to the boundaries of estates. This applies in particular to the ecotone between heathland and forest, in which adjustments are possible without any major economic sacrifices. The aim is not necessarily to replace conifer plantations with deciduous trees, but gradually to give the forest areas a structure that is diversified as to species and ages - which is very advantageous from the ornithological point of view - and more natural transitions between heathland and forest. A joint study could be made to pinpoint desirable locations for such measures and define the rules to be complied with.

2. <u>Protection of biotopes</u>. The local flora is, admittedly, relatively poor compared with that of other parts of temperate Europe, but its habitats are fairly diversified. Partfcular attention should be given to the least common biological sites, ie in the valleys; peat-bogs and marshes, myrica gale thickets, alder groves and young birch groves. We found that action was already planned in several valleys, including the Seeve valley, which has some quite remarkable biological features.

The local fauna is not lacking in interest either. This is true of the march birds and the black grouse. Here again, very interesting results are possible without great expense.

3. <u>Conservation of the "Heidschnucken" moorland sheep</u>. The NSG shelters the last remaining flock of a breed of sheep which is indigenous to the vast heathlands that once covered the sandy plains of north-west Europe. To preserve the genetic purity of the breed, it will be necessary to restore its natural environment. For this purpose, it is desirable first of all that the sheep should be bred on the heathland and in sufficient numbers to maintain the heathland indefinitely; but it is also necessary to maintain a balance between the heather pastures and the more fertile and nutritive grasslands. At present, the heather pastures are still considered insufficient compared with the better quality grasslands, and this is prompting the VNP to increase the area of heath on any new land it acquires.

The recovery of the military land in the Tütsberg area must be considered as a possible solution to this problem, unless other alternatives can be found.

9. CONCLUSIONS

The favourable development of the Reserve since 1976 most certainly warrants the renewal of the European Diploma in category C, and this despite the fact that responsibility and financial burden are borne almost entirely by only one of its managers (the VNP).

We feel, however, that renewal could be accompanied by the following recommendations:

1. The nature conservation authorities of Lower Saxony should ensure that a concerted, and hence better-integrated, system of management is introduced for the Reserve as a whole, eg in the form of a management committee responsible for pursuing the three major objectives of the NSG: conservation and structure of the landscape, protection of rare biotopes and conservation of the local sheep breed ("Heideschnucken") and of the environment best suited to it. 2. Nature reserves as defined in the outline law of 1979 should be created in the most suitable sites, such as the Pietzmoor or the Seeve valley. Their botanical, ornithological and hydrobiological interest seems self-evident. These reserves could be incorporated into the Council of Europe's network of biogenetic reserves.

3. It would also be desirable to incorporate into the European network the old heathlands of the Wilsede area as a characteristic fragment of the old moraine and as a conservation area for the ancient indigenous sheep breed, the "Heideschnucken".

If the European Committee and the Committee of Ministers of the Council of Europe were to adopted these recommendations, they should be transmitted together with the certificate of renewal of the diploma to the Minister-President of Lower Saxony, the senior authority for nature conservation matters.