

THE GWENT LEVELS HISTORIC LANDSCAPE STUDY

by Stephen Rippon and Rick Turner

The Editorial in *NewsWARRP* 13 (Coles 1993) noted the upsurge of wetland work in England, and stressed the importance of identifying the wetland resource and managing it for the future. A project with just this aim has begun on the Gwent Levels, approximately 26,800 acres (10,850 hectares, 108 km²) of low lying alluvium fringing the coastline of south east Wales. The Levels are divided into two parts; Wentlooge to the west of the Usk, and Caldicot to the east. Their ecological importance is recognised by their status as a Site of Special Scientific Interest, while their cultural heritage is reflected in the designation of large parts of the Levels as 'Special Landscape Areas' in the Gwent County Structure Plan (Gwent County Council 1992).

However, this landscape is threatened in a number of ways. A report prepared by the Nature Conservancy Council in 1991 identified that at 18th July 1990 there were pending or proposed developments affecting 663 ha of the Gwent Levels, representing the potential loss of 19% of Wentlooge and 6% of the Caldicot Level (Countryside Council for Wales 1991). In addition, the construction of the Second Severn Crossing and proposed M4 Relief Road will increase pressure to release land for further industrial development. The Alternative Bird Feeding Grounds, resulting from the construction of the Cardiff Bay Barrage, will potentially change a significant and important part of the historic landscape, while the National Rivers Authority have begun a ten year programme of raising the sea-wall, which will also have an impact on this area. There is also a wide variety of superficially less damaging threats resulting from piecemeal agricultural improvement and such 'green' developments as golf courses and trout

fisheries. The resulting infilling of drainage ditches and removal of field boundaries is a major threat to the integrity of the historic landscape.

Nowhere else in Wales is it so easy to distinguish historic landscapes of such a variety of different periods. This area is also the largest Site of Special Scientific Interest in Wales, yet nowhere else in the Principality is under such development pressure. There is an urgent need to carry out the study outlined here.

The Current State of Knowledge

A preliminary assessment of the Gwent Levels landscape suggests that a series of areas can be distinguished as having distinctly different origins (Rippon 1993, chapter 4). The oldest landscape is that of central Wentlooge, which recent work at Rumney Great Wharf has proved to be of Roman date (Allen and Fulford 1986; Fulford, Allen and Rippon 1994). This consists of a regular pattern of small rectangular fields.

Secondly, there are extensive areas of extremely complex landscape covering much of the higher coastal areas. This is characterised by small, irregularly-shaped fields, and broad droveways with extensive roadside common land (e.g. Figure 46). These areas may have been settled by the Norman Conquest in the late eleventh century, though at present we know little of the chronology or processes behind the reclamation. The pattern of droveways suggests a strong pastoral element in the economy of this area, involving land both in front and behind the sea-wall and on the higher ground bordering the Levels.

The third landscape type is of a more regular appearance, and consists of long blocks of narrow strip-fields (e.g.



Figure 46. Gwent Levels: The field boundary pattern of western Caldicot c. 1880.

Figure 47). These represent a more co-ordinated approach to reclamation than was seen in the irregular landscapes, but can only be broadly dated to the medieval period at present.

The final broad type of landscape is represented by the highly regular field patterns created by the last phase of reclamation in the lowest lying backfens during the eighteenth and nineteenth centuries. This area can have its own particular features such as the two duck decoys lost beneath Llanwern Steel Works.

Other critical parts of the historic landscape are major linear features

such as sea-walls and drainage channels. The Levels are traversed by a series of 'pills' that carried streams to the coast, preventing them from flooding the low lying ground. These are an important part of the landscape but have never been recorded in detail. Another element is the settlement pattern, which in places is very dispersed, whereas elsewhere it is highly nucleated. This needs to be integrated with all the other evidence, as changes in the settlement pattern will reflect changes in the wider landscape.



Figure 47. Gwent Levels: Selected morphological elements in the western Caldicot landscape.

Little is also known of the changing patterns of land-use. We can expect the thirteenth century to have seen the peak of arable cultivation on the Levels, but its extent is presently unknown. The environmental and demographic decline of the fourteenth century led to a shift towards pastoralism which was hastened in the early seventeenth century by a major episode of flooding. Much greater detail than this is required in order to understand the historical ecology of the area.

Research Objectives

The overall aim of this study, jointly funded by Cadw : Welsh Historic Monuments and the Countryside Council For Wales, is two-fold. Firstly, to determine when and how the present landscape was created, and secondly, to assess the different parts of this landscape in terms of their historical importance, ecological interest and visual character. The summary above indicates that our evidence only allows

us a very general model of landscape evolution. There needs to be a greater clarity both spatially and chronologically as to the origins and exploitation of different field-systems. We also need a more detailed understanding of how reclamation was undertaken, and the methods by which those reclaimed landscapes were then maintained and exploited.

By identifying individual episodes of reclamation, the landscape can be broken down into a number of distinct units. The particular qualities of each area need to be highlighted and the survival of historic features quantified. This structured information will form the basis by which the impact of potential developments can be assessed during the planning process. Up until modern times, the development of this landscape has been controlled by the pattern of drainage and land-use. New developments do not need to respect this pattern. They can lead both to the loss or fragmentation of historic features, and change the visual character of a wide area.

By contributing to a greater understanding of the historic landscape, this study will also contribute to developing a predictive model for where buried prehistoric and Roman archaeological sites may occur. Field evaluation for any new developments need to consider their impact not only on the visible, but also on buried, archaeological sites.

Finally, where new developments are permitted, this study will inform the design of any mitigatory measures, by showing how to integrate any new drainage pattern, planting and to some extent the design of buildings, into the existing landscape.

Methodology and Data

The first stage will be a retrogressive analysis of the landscape to examine how it has evolved and the identification of individual reclamations (see Rippon this volume p. 31). Each

reclamation can then be dated by means of morphological and metrical characteristics and documentary references. Each area will be examined in the field. The pattern of past landownership may also be very informative in terms of how a community went about reclamation.

The second stage will be to quantify the loss of broad landscape types, described above, in recent times. This will be based upon three main sources; the Commissioners of Sewers Maps of 1830-1, the Ordnance Survey First Edition Six Inch Series of c. 1880, and the R.A.F. air photographic coverage of the immediate post-War period. Estimates will also be made of the loss by erosion of parts of the Romano-British and medieval reclamations by the sea.

The third stage of the study is to assess the historical importance of these landscapes. Such work is currently in its infancy, though the methodology proposed by Lambrick (1992), based on the criteria for scheduling ancient monuments, could be adapted for this study. The Levels will have been divided into small coherent parcels or blocks, defined on the basis of when and how they were reclaimed. Each block will then be used as the units with which to consider a number of attributes including date, historical significance, complexity including the diversity of elements, and preservation. This assessment will be based upon a field examination, as well as the desk-top study. The field assessment will examine features previously identified from cartographic and air photographic sources. It will also locate other features not visible on these sources. Visual amenity will be considered for each landscape unit.

This project will run from 1993-5. We would be interested to hear from anyone who is undertaking similar work on reclaimed wetlands, whether in terms of landscape evolution, assessment or resource management. Please contact the first-named author

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