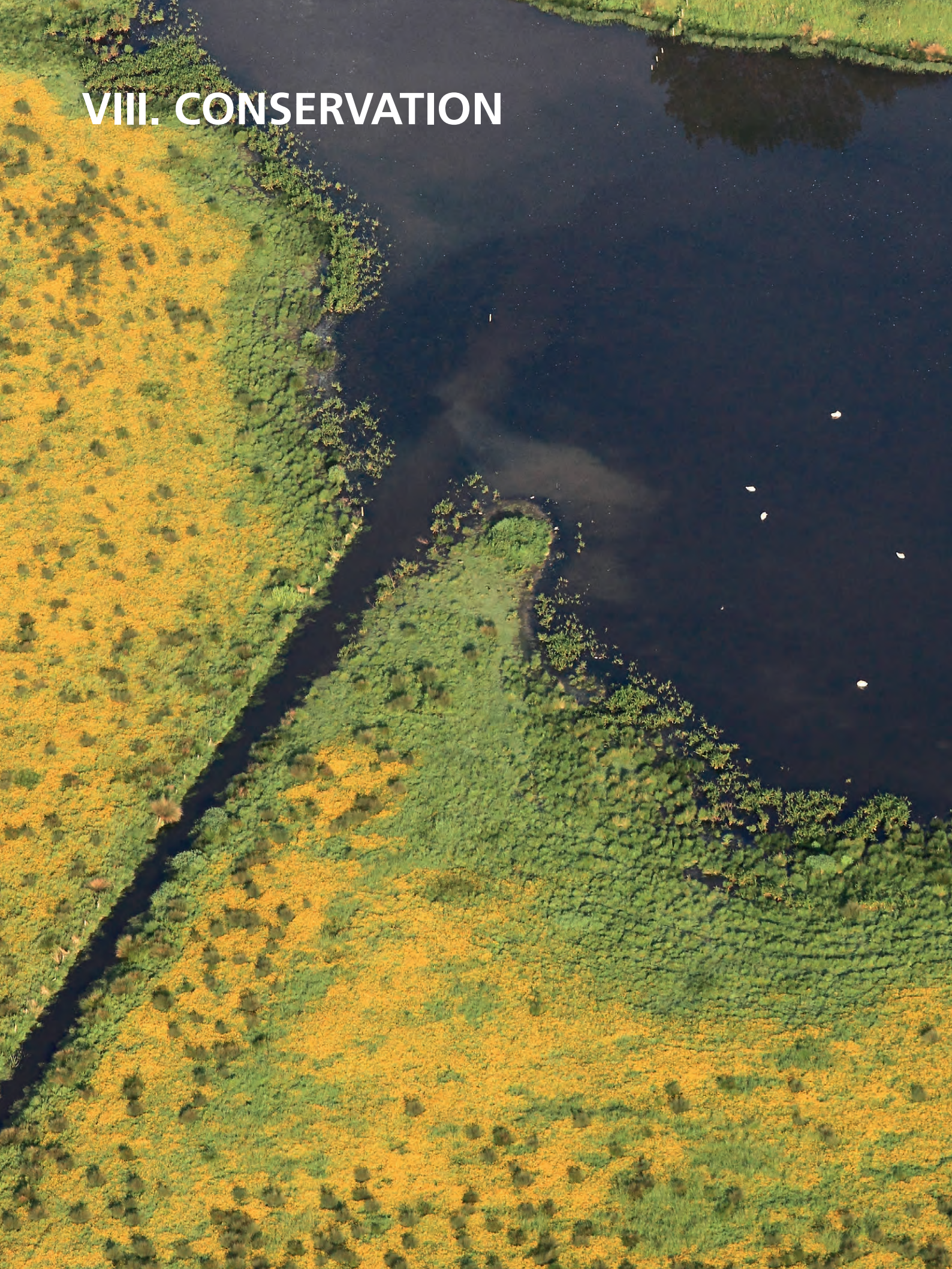
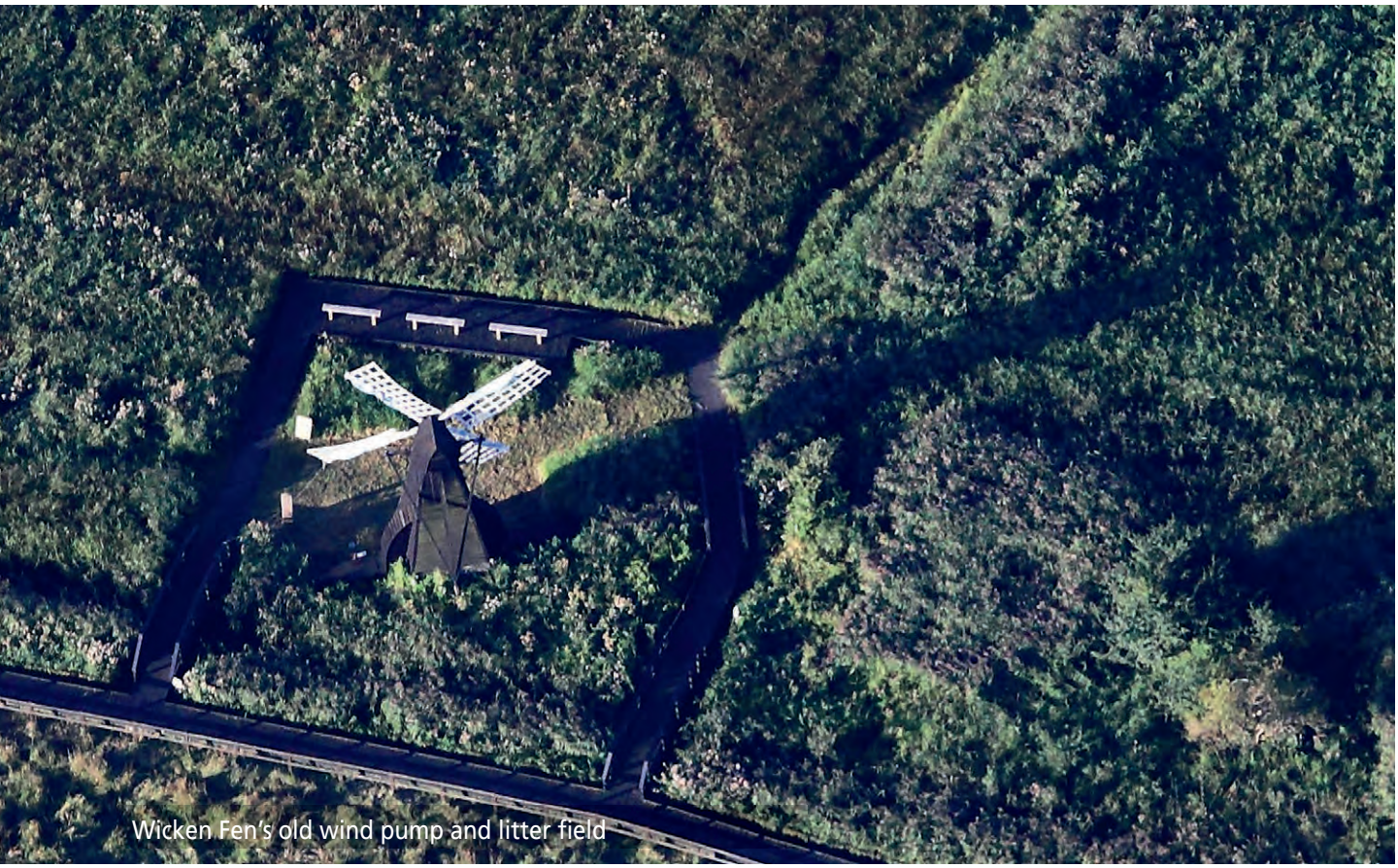
VIII. CONSERVATION



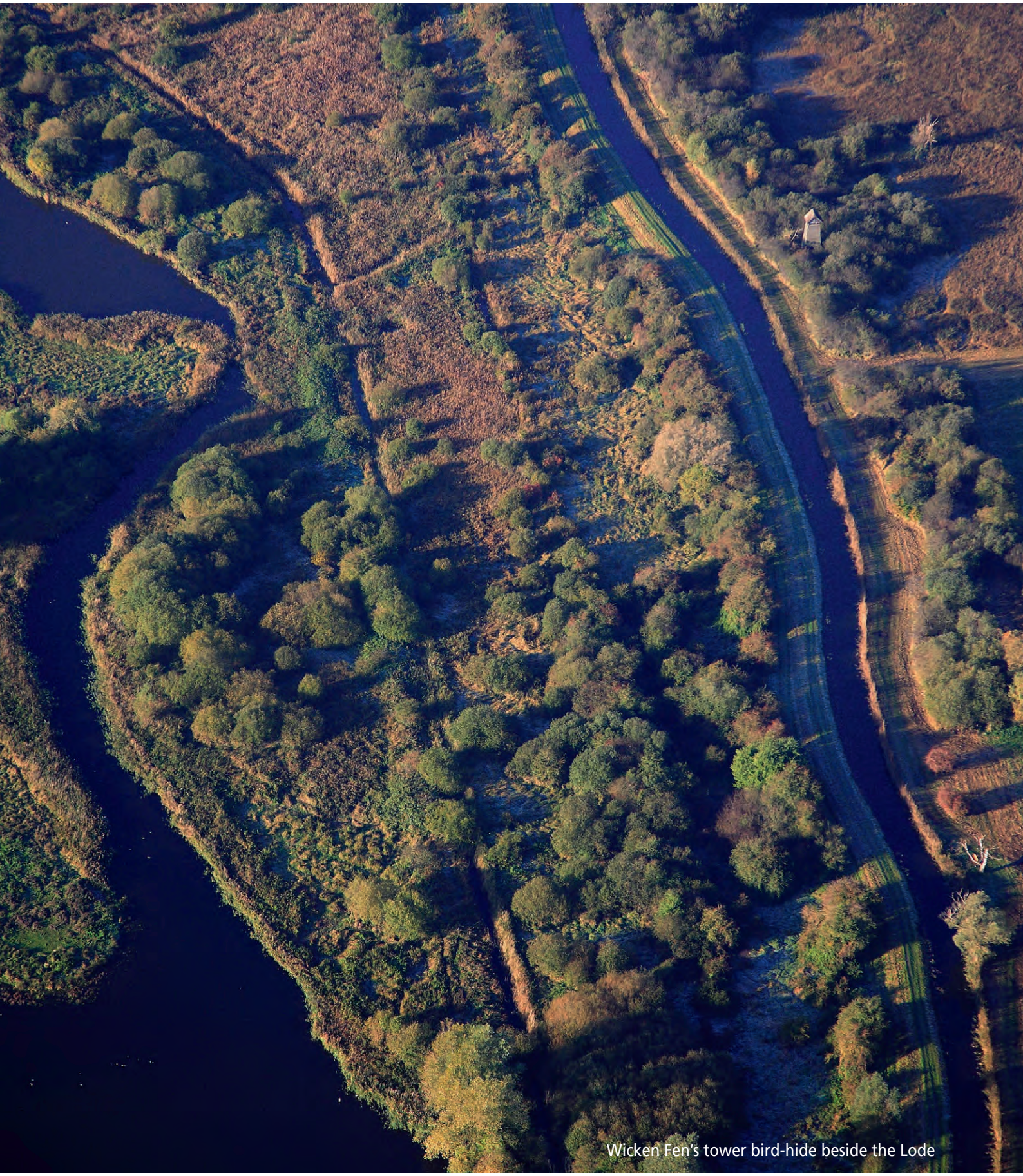


Wicken Fen's old wind pump and litter field

In considering the conservation of the Cam, its nature and environment, one needs to understand the many changes that have been made over time; with those thoroughly understood one can fight for what is most valued and attainable. Conserving the river is not easy to do. Without any doubt the greatest threat to the River Cam is our own human numbers.

The Cam valley catchment - the 'Cam Country' of this book - draws on streams from neighbouring counties as well as much of south and east Cambridgeshire. This region has the lowest rainfall of anywhere in Britain. The mean in Cambridge is only 56 cm per year so we should not expect great river flows. Although there is now a pattern of increased variability, in annual rainfall events, there is no real evidence that there is less rain in total than in past periods of recent history. However, man-made changes to the environment of the Cam valley have altered flow patterns. These human induced changes have done more to the river's system than any change in climate. We know that a catchment well covered in woodland and pasture will even out both the stream and river flows and allow more water to permeate more deeply into its aquifers. Deep flowing ground-water will emerge, in the springs, months later. The ideal would be a river that ran continually with fresh and clean water in wide meandering streams. The Cam is prevented from being such a healthy river for three key reasons.

First, the chalk aquifer is the major source of the Cam's permanent flow, but that source is mined intensively by pumping water from it to supply the growing human population. Many farmers have small water abstraction licenses too. In consequence, the water-table has fallen and many springs have all but ceased. At 'Nine Wells', near Addenbrooke's Hospital, there are barely any springs feeding Hobson's Brook. The Cam's chalk-streams are reduced and are near static in some summers. Awareness of the impact of this water extraction has lead the Environment Agency to attempt to ease the loss of flow by pumping supplementary water into several drying springs. Thus the illusion of 'fresh chalk springs' is maintained by sleight of hand. This drying of the tributary rivers has gone on for at least a century and the more markedly so in the past 50 years. River flows are much reduced from their historic levels when, as we know, water mills were on every tributary stream south of Cambridge. One might expect at least a fifth (20%) of the rain that falls on the



Wicken Fen's tower bird-hide beside the Lode