

## Case Study: Tiddenfoot Waterside Park and Ledburn Quarry

RIGS leaflet *Lower Greensand: Tiddenfoot & Ledburn Quarries*

### **Introduction**

Tiddenfoot Waterside Park is a public park in the south of Leighton Buzzard (OS grid reference SP 912240). It was a working sand pit until the 1970s, after which it was restored to create a public park of grassland and trees surrounding a large central lake. A variety of surfaced and unsurfaced paths provide access to the park and lake.

Just across Mentmore Road from Tiddenfoot is Ledburn Quarry (grid reference SP 908239), another disused sand quarry. Ledburn has been inactive for around 10 years; part of the site is now open to the public, and offers a good opportunity to assess the progress of natural succession in the quarry.

### **Geological History**

Both Tiddenfoot and Ledburn quarried the sands of the Lower Greensand. These were deposited in the Cretaceous period, some 100 million years ago. Today they form an escarpment, the Greensand Ridge, running across Bedfordshire.

Cretaceous Bedfordshire lay on the bed of a warm shallow seaway into which rivers running south from what is now Yorkshire were depositing sands and other sediments. Subsequent erosion by wind, water and ice have exposed these sediments for us to use - and to reveal the habitats found in this area 100 million years ago.

### **Tiddenfoot and Ledburn Today**

There are no exposures of sand at Tiddenfoot today, but various clues allow visitors to assess the impact of sand as a substrate. The level of lake changes dramatically as the water table rises and falls, because the Lower Greensand is an aquifer. Plants growing on the surface also indicate the type of soil: gorse, for example, thrives on dry, sandy soils. Moss indicates areas of low fertility, whereas dense grass growth suggests a more fertile soil.

There is a good exposure of the Lower Greensand on the eastern side of Ledburn Quarry, just below Mentmore Road. The holes made by nesting Sand Martins (a bird that relies on sand quarries in this area) can still be seen in the cliff face, as can the parallel lines that record movements in the sands 100 million years ago.

### **Fieldwork and further study ideas**

- Quarrying and restoration opportunities
- Investigate visitor pressure and management
- Local geology and the Greensand Ridge
- Investigate the sources and uses of local aggregates
- Investigate local habitats

