

**Site Name:** Ely Pits and Meadows SSSI **County:** Cambridgeshire

**District:** East Cambridgeshire

**Status:** Site of Special Scientific Interest (SSSI) notified under section 28C of the Wildlife and Countryside Act 1981, as inserted by Schedule 9 to the Countryside and Rights of Way Act 2000.

**Local Planning Authority:** East Cambridgeshire District Council

**National Grid reference:** TL554806 **Area:** 85.84 ha

**Ordnance Survey Sheet:** **1:50,000:** 143 **1:10,000:** TL58SW/SE

**Notification date:** 10 June 2008

### Reasons for notification:

Ely Pits and Meadows SSSI is a nationally important site as the best fossil reptile locality in the northern outcrop of the Kimmeridge Clay, for its breeding bird assemblage of lowland open waters and their margins, and for breeding and wintering bitterns *Botaurus stellaris*.

### General description:

Roswell disused clay pits, Queen Adelaide disused beet pits and associated areas of wet grassland with ponds, lie east of Ely adjacent to the River Great Ouse. They form an extensive series of open waters in association with a wide range of marginal features, including islands dominated by common reed *Phragmites australis* and more extensive areas of reedswamp, wet ditches, rough grassland, deciduous woodland and scrub. This range of habitats provides valuable nesting, resting and foraging areas for nationally important breeding and wintering bird interests. The land between Roswell Pits and Ely contains an unexcavated reserve of the Kimmeridge Clay, an important source of fossil reptiles.

### Geology

The outcrop of the Kimmeridge Clay at Roswell clay pits has yielded a diverse assemblage of Kimmeridgian reptiles, largely, if not exclusively, from the *Aulacostephanus eudoxus* zone. Within the assemblage, sauropod dinosaurs and pliosaurs are of particular significance. The sauropods, which are generally rare in the European Kimmeridgian, are represented by two taxa (*Pelorosaurus humerocristatus* and *Gigantosaurus megalonyx*), the remains of which consist of several post-cranial skeletal elements. The pliosaurs from Roswell Pits consist of three taxa, and the skeletal material from here formed the basis for understanding the taxonomic status of this group of reptiles during the late Jurassic. In addition to the sauropods and pliosaurs, the site has yielded one species of turtle, three genera of crocodiles (including the type material of *Dakosaurus lissocephalus*), the plesiosaur *Colymbosaurus* and two ichthyosaur genera (*Macropterygius* and *Ichthyosaurus*). The composition of the reptile assemblage from Roswell Pits differs from those of the Kimmeridgian in Dorset and Oxfordshire in that pliosaurs dominate the assemblage whilst pterosaurs appear to be absent. Roswell Pits has yielded one of the richest and most varied Kimmeridgian reptile assemblages and provides information about the composition of these assemblages in the northern part of the Kimmeridge Clay outcrop.

### Breeding and wintering birds

The mosaic of habitats within the site supports a variety of breeding birds associated with open waters and their margins, including nationally important numbers of bittern *Botaurus stellaris* during the breeding season. Roswell clay pits and Queen Adelaide beet pits are of particular importance for this assemblage.

At least 13 species comprise a regular breeding assemblage, including mute swan *Cygnus olor*, gadwall *Anas strepera*, little grebe *Tachybaptus ruficollis* and great crested grebe *Podiceps cristatus*. Stands of marginal vegetation and scattered scrub around the pits provide nesting habitat for bittern, marsh harrier *Circus aeruginosus*, bearded tit *Panurus biarmicus*, reed warbler *Acrocephalus scirpaceus*, sedge warbler *A. schoenobaenus*, reed bunting *Emberiza schoeniclus*, and cuckoo *Cuculus canorus*. Exposed banks of the clay pits provide nesting sites for kingfisher *Alcedo atthis*. The washland and wet grassland north of the

River Great Ouse also support several of the assemblage species, including mute swan, gadwall and snipe *Gallinago gallinago*, as well as providing foraging habitat for marsh harriers.

The site supports nationally important numbers of bitterns during the breeding season and over winter. Breeding bitterns are extremely elusive and best detected by the 'booming' calls given by males holding territory in spring. Wintering bitterns and booming males in the spring have been recorded at both the clay pits and beet pits, where shallow waters and reedbeds offer a range of undisturbed habitat at key locations. There is a functional link in the use of these key locations by bitterns, making both the clay pits and beet pits integral to the success of this species at the site. Bittern is a nationally rare breeding bird, mostly found in coastal reedbeds which are increasingly vulnerable to rising sea levels. Established inland sites are therefore of particular and increasing importance for the species.

In addition to the reasons for notification described above, the SSSI also supports breeding water voles *Arvicola terrestris* and provides foraging habitat for otters *Lutra lutra* and at least six species of bat.