Site name: Orton Pit **County:** City of Peterborough

District: City of Peterborough

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 & Rights of Way Act 2000.

Local Planning Authority: Peterborough City Council

National Grid Reference: TL 163940 **Area:** 145.00 ha

Ordnance Survey Sheet: 1:50,000: 142 **1:10,000:** TL 19 NE, SE

Date Notified: 23 March 2004

Reasons for notification:

Orton Pit is of special scientific interest by reason of its population of great crested newts *Triturus cristatus*and a network of meso-eutrophic standing water habitats which support an assemblage of nationally rare and scarce charophyte (stonewort) species.

General description:

Orton Pit contains extensive areas of former brick clay workings comprising a series of linear spoil heaps and pools referred to locally as 'ridge and furrow.' The method of clay working used has provided a varied topography which has encouraged the development of a mosaic of habitats, in particular both open and dense scrub, rough grassland, ruderal vegetation, emergent and aquatic vegetation and open water pools.

Great crested newts

The particular combination and distribution of aquatic and terrestrial habitats provide ideal breeding, foraging and hibernation conditions for the great crested newt. Numbers of newts recorded are unusually high and constitute the largest known population in Britain. The newts depend on water for breeding, which takes place in spring, and particularly favour moderately deep, well-vegetated pools without fish. The great number (over 300) and variety of pools on the site, which are rain-fed and hence of high water quality, provide extremely good conditions for newts. During the first two or three years of life before breeding starts, and outside the breeding season, great crested newts are dependent on terrestrial habitats to provide foraging areas and places to hibernate. The habitats which occur around the pools on this site are as important as the presence of suitable pools.

Standing open water

The standing open water habitats of the site are representative of a type of water body which is very rare throughout the British Isles. The manner in which the clay was extracted has resulted in a series of linear ponds created over a considerable period of time. The ponds are consequently of varying ages and represent a range of successional stages. Dissolved salts from the exposed clay substrate of the ponds have resulted in a water chemistry that mimics the slightly saline conditions more typically associated with coastal lagoons and lochs in the Northern and Western Isles of Scotland. Reflecting the range of hydro-chemical conditions, a corresponding aquatic flora has developed with communities according to Types 7 (eutrophic-oligohaline) and 10 (eutrophic) of the British standing water classification system. The open water of the

ponds is characterised by pondweeds *Potamogeton* species (fen pondweed *P. coloratus,* fennel pondweed *P. pectinatus,* lesser pondweed *P. pusillis* and broad-leaved pondweed *P. natans*), an abundance of *Chara* species, mare's-tail *Hippuris vulgaris* and spiked water-milfoil *Myriophyllum spicatum.* The pond margins are typical of eutrophic or brackish conditions and comprise common reed *Phragmites australis,* common club-rush *Schoenoplectus lacustris,* grey club-rush *S. tabernaemontani,* lesser bulrush *Typha angustifolia* and bulrush *T. latifolia.*

Charophytes

The site is particularly noteworthy for the number of stonewort (charophyte) species present. The nationally rare bearded stonewort *Chara canescens*, once thought extinct in Great Britain and listed in Schedule 8 to the Wildlife and Countryside Act 1981 (as amended), is most associated with the youngest ponds on the site. Another nine species of stonewort occur on the site, four of which are nationally scarce – hedgehog stonewort *Chara aculeolata*, lesser bearded stonewort *C. curta*, smooth stonewort *Nitella flexilis* and clustered stonewort *Tolypella glomerata.*

In addition to the reasons for notification described above, the site also supports high numbers of smooth newt *Triturus vulgaris* (an important prey species for great crested newt) and large populations of common toad *Bufo bufo,* common frog *Rana temporaria,* common lizard *Lacerta vivipara* and grass snake *Natrix natrix*. The site supports protected mammals including badger *Meles meles,* water vole *Arvicola terrestris* and foraging bats. Fifteen species of dragonfly and damselfly have been recorded, twelve of which have bred. Aquatic invertebrates recorded include thirteen nationally notable and one Red Data Book water beetle. Two nationally scarce vascular plants occur, namely fen pondweed *Potamogeton coloratus* and golden dock *Rumex maritimus*.