

SITE NOTIFIED TO THE SECRETARY OF STATE ON THE 28TH  
OCTOBER 1988

COUNTY: NORFOLK            SITE NAME: THOMPSON WATER, CARR AND  
COMMON

DISTRICT: BRECKLAND

Status: Site of Special Scientific Interest (SSSI) notified under Section 28 of the  
Wildlife and Countryside Act 1981.

Local Planning Authority: Breckland District Council

National Grid Reference: TL 930955            Area: 156.0 (ha.) 385.5 (ac.)

Ordnance Survey Sheet 1:50,000: 144            1:10,000: TL 99 SW, TL 99 NW

Date Notified (Under 1949 Act): 1954            Date of Last Revision: 1968

Date Notified (Under 1981 Act): 1988            Date of Last Revision: –

Other Information:

The site is listed in A Nature Conservation Review (Ratcliffe 1977). Most of it  
is managed as a Nature Reserve by the Norfolk Naturalists' Trust.

Description and Reasons for Notification:

This site comprises a mosaic of habitats supporting a wide range of plant  
communities developed in response to variations in topography, soil type and  
wetness. Although lying at the northern edge of Breckland, its position on a  
tributary of the River Wissey has lent the site more of a damp lowland grassland  
character than typical breck-heath. The diversity of the grassland communities is  
enhanced by the presence of damp and water filled depressions, known as  
'pingos', formed at the end of the last glaciation, where various open-water and  
fen communities have developed. Scrub, woodland and an artificial lake further  
contribute to the site's variety, which as a whole supports an exceptional  
number of plant and animal species, several of them rare, and including an  
invertebrate fauna of considerable national importance.

Thompson Common takes in the highest density of ground-ice depressions of  
any of the remaining Breckland 'pingo' systems. Many of these retain water  
throughout the year and the aquatic flora includes water violet *Hottonia palustris*  
and Maretail *Hippuris vulgaris*. These ponds support a relict community of  
aquatic beetles which, together with that of a few other remaining Norfolk  
pingo systems, is unique in Britain. An unparalleled total of 34 species  
considered to be rare or particularly notable has been recorded, including  
*Hydroporus scalesianus*, *Agabus undulatus* and *Hydraena palustris*.  
Additionally a diverse community of terrestrial invertebrates, including rare and  
local species of Diptera (true flies) and dragonflies, is dependent on the ponds  
for breeding, as is an exceptionally large population of amphibians. The site  
supports a colony of the pool frog *Rana lessonae* and the largest population of  
great crested newts *Triturus cristatus* currently known in West Norfolk.

Around the margins of depressions and in seasonally dry hollows a wide  
variety of wetland habitats has developed. Where water level fluctuations are  
most marked marsh pennywort *Hydrocotyle vulgaris* and mints *Mentha aquatica*  
and *M. arvensis* characterize a low-growing community subject to occasional  
inundation. The uncommon fen pondweed *Potamogeton coloratus* is present  
here. Grazed areas have developed herb-rich damp grassland of false oat-grass

*Arrhenatherum elatius* and couch grass *Elymus repens* with southern marsh orchid *Dactylorhiza praetermissa*, early marsh orchid *D. incarnata* and, locally, strawberry clover *Trifolium fragiferum*. This grades into a floristically diverse short-fen community in low-lying areas where peat has developed. Blunt-flowered rush *Juncus subnodulosus* typically dominates here, and characteristic associates include marsh lousewort *Pedicularis palustris*, bog pimpernel *Anagallis tenella*, carnation sedge *Carex panicea* and marsh arrowgrass *Triglochin palustris*. Where water collects acid conditions have developed, resulting in the establishment of bottle sedge *Carex rostrata*, bogbean *Menyanthes trifoliata*, marsh cinquefoil *Potentilla palustris* and common cotton-grass *Eriophorum angustifolium*.

Scattered areas of tall fen have developed in some low-lying areas and around ungrazed margins of depressions. Greater tussock sedge *Carex paniculata* gives way to the much scarcer fibrous tussock sedge *C. appropinquata* in acid conditions whilst in areas dominated by reed *Phragmites australis*, saw sedge *Cladium mariscus* and uncommon species such as greater spearwort *Ranunculus lingua*, milk parsley *Peucedanum palustre*, narrow small-reed *Calamagrostis stricta* and cowbane *Cicuta virosa* are present.

Broad ramparts of dry grassland, mainly calcareous in nature, occur around the depressions towards the northern end of the site. Here sheep's fescue *Festuca ovina* and sweet vernal grass *Anthoxanthum odoratum* dominate a herb-rich turf with species such as dwarf thistle *Cirsium acaule*, common quaking grass *Briza media*, salad burnet *Sanguisorba minor*, hoary plantain *Plantago media* and dropwort *Filipendula vulgaris*. To the west several fields of unimproved neutral grassland are present, dominated by creeping bent *Agrostis stolonifera* and red fescue *Festuca rubra*. Elements of both damp and calcareous grassland types are present in this sward.

Dense hawthorn *Crataegus monogyna* scrub occurs on drier parts of the site, with extensive oak *Quercus robur* and birch *Betula pendula* woodland forming Stowbedon Covert in the east. Bramble *Rubus fruticosus* (agg.) and bracken *Pteridium aquilinum* dominate the ground flora. Thompson Carr is damp woodland dominated by alder *Alnus glutinosa* and oak with a ground flora including yellow iris *Iris pseudacorus*, dog's mercury *Mercurialis perennis* and the locally uncommon marsh fern *Thelypteris thelypteroides*. These woodland areas support breeding sparrowhawk, woodcock, redstart and nightingale, and notable invertebrates dependent on dead wood include the hoverflies *Criorhina asilica* and *Xylota abiens*.

At the western end of the site is Thompson Water, a shallow eutrophic man-made lake that is floristically similar to the non-fluctuating Breckland meres. Aquatic macrophytes are few with yellow water-lily *Nuphar lutea* being the most abundant, but the lake and its surrounding extensive reedswamp and sallow *Salix spp.* carr is important for breeding birds including great crested grebe, mallard, teal, gadwall, shoveler, pochard, tufted duck and reed warbler. Wintering wildfowl are also attracted to the site.