

Catfield Renewals

March 2014

The Groundwater Summary Report

The aim of the Groundwater Summary Report (hereafter referred to as 'the report') is to assess the potential effect of the two renewal applications on the Ant Broads and Marshes SSSI, a component SSSI of the Broads Special Area of Conservation (SAC), Broadland Special Protection Area (SPA) and Broadland Ramsar. site in terms of changes in groundwater levels and chemistry. The assessment makes use of the Environment Agency's Northern East Anglia Chalk (NEAC) groundwater model, monitoring data and a simple water quality mixing model. The report builds on the methodology adopted under the Habitats Directive Review of Consents (2006) and considers in detail the potential effects of abstraction on the water chemistry of the fringe areas of the Ant Broads and Marshes SSSI, particularly the Middle Marsh area of Catfield Fen.

The report has been produced by Environment Agency (EA) staff. AMEC consultants have been directed to investigate particular aspects, and have reported back in a series of technical notes, which support and accompany the report. The report represents the findings of the technical sub-group of EA staff tasked with assessing abstraction impact on Catfield Fen. Technical expertise in specific subjects has been sourced from AMEC where this is not available within the EA. Areas of investigation suggested by Natural England, the Broads Authority and key stakeholders have been reported in the report or accompanying technical notes.

The NEAC model* is the result of a 15 year programme of development and operation, and represents the cumulative knowledge of hydrogeologists and hydrologists working in East Anglia over a much longer period. Quality assured data used to calibrate the model has come from a number of sources, including (but not limited to) pumping tests, groundwater monitoring and gauged river flow. The model is considered to be the best tool available to allow quantitative predictions of groundwater impact to be made.

The Review of Consents assessment for Catfield Fen has been revisited and Natural England have provided some further areas for consideration beyond the impacts to wetland community requirements as considered in the original assessment.

The report is a record of this process to inform and support a licensing decision.

*The Yare North Norfolk Model preceded NEAC, and is a component of it.