

Restoring Sustainable Abstraction – Summary Document

Site Name: The Broads Special Area of Conservation (SAC) and Special Protection Area (SPA).

Driver: Habitats Directive

Licence Holders: see below

This Licence Change Proposal Report relates to six permanent groundwater licences in northeast Norfolk that are considered to have (or contribute to) an unacceptable effect on parts of The Broads SAC/Broadland SPA that lie within the Ant river-valley. The component SSSIs affected by these licences are identified in Table 1 below. The location of the licences in relation to each of the SSSIs is identified in Figure 1.

Table 1

Permanent Groundwater Licences		Ant Broads & Marshes	Alderfen Broad	Broad Fen, Dilham	Smallburgh Fen
7/34/09/*G/0001	Albert Bartlett & Sons Ltd			✓	✓
7/34/09/*G/0139	P Boardman & N Coller	✓			
7/34/09/*G/0094	R & J M Place Ltd	✓	✓		✓
7/34/09/*G/0086	R & J M Place Ltd			✓	✓
7/34/09/*G/0101	J A Paterson & Co. Ltd			✓	✓
7/34/09/*G/0045	Rumford Ltd				✓

Background

These licence changes have been identified following a 10-year investigation into the effects of abstraction on the hydrological regime of the Ant valley prompted by reports that SAC habitat features within the Ant Broads and Marshes SSSI are deteriorating.

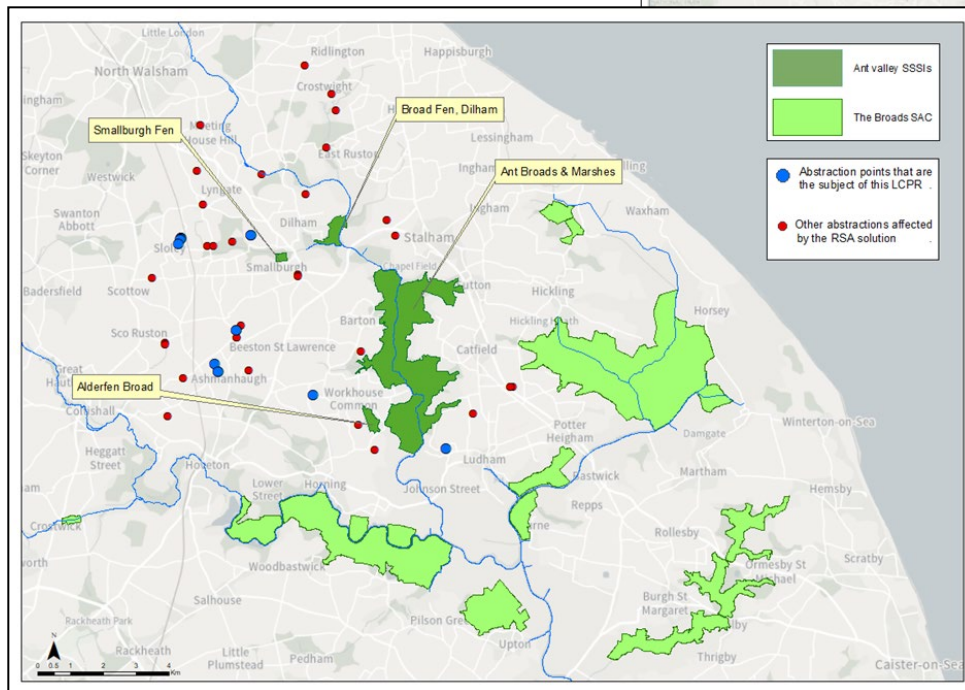
The changes proposed for these six groundwater licences form part of a much wider licence-change solution required to protect and help restore the quality of four SSSIs within the Ant valley.

The overall licence change solution includes:

- 11 permanent surface water licences which will be the subject of a separate LCPR
- 11 additional groundwater licences that are time-limited and which will be changed through the licence renewal process;
- three previously exempt abstraction activities which will be refused through the New Authorisations determination process; and
- two water company licences which have already been changed through the Price Review 2019 / AMP7 Water Industry National Environment Programme.

It should be recognised that this is a complex solution developed to meet a range of hydrological objectives specified by Natural England (NE). Each of the licence changes are required as they are proposed; any change to one or more element(s) of this solution could require a revision of the whole solution, leading to further changes to the same suite of licences, or to other licences needing to be included.

Figure 1. Location of the Ant valley SSSIs



What is the problem?

The Broads SAC / Broadland SPA supports a complex system of open water and wetland habitats which are particularly dependent on a supply of base-rich water derived from the underlying chalk and crag aquifers. Changes in habitat diversity and species composition have been recorded within the Ant valley SSSIs, particularly within the *Calcareous fen* SAC habitat feature at Catfield Fen (part of the Ant Broads and Marshes SSSI). NE has confirmed that the condition of this feature and associated features (such as the Fen Orchid) has deteriorated.

The changes observed are consistent with a change in the pH / base-richness of water that arrives at the fen surface, either directly from groundwater flushing or from surface water inundation. Modelling has confirmed that groundwater inputs to the fen surface (either directly or indirectly) have been significantly reduced as a result of licensed abstraction across most parts of the Ant Broads and Marshes SSSI, and three adjacent SSSIs within the Ant valley which are all part of The Broads SAC. Deterioration of SAC habitats within these SSSIs has been documented by NE.

NE has specified a series of hydrological objectives required to support restoration of these habitats to a favourable condition and to ensure that abstraction does not prevent the SAC Conservation Objectives from being achieved.

What do we want to do to solve the problem?

We are proposing that four permanent groundwater licences are revoked completely with effect from 1 October 2024. We are also proposing that one licence is significantly reduced in volume with effect from 1 October 2024 and reduced further with effect from 1 October 2026. Finally, we are proposing one licence is reduced in volume with effect from 1 October 2024 and revoked completely with effect from 1 October 2026.

Table 2 - Proposed changes to groundwater abstraction licences

Permanent GW Licences		Licence change proposal	Alternative supply options
7/34/09/*G/0001	Albert Bartlett & Sons Ltd	Revoke licence with effect from 1 October 2024	A new connection to the Public Water Supply (PWS) will meet their current water requirements, but this new supply will not be sufficient to meet planned growth between now and 2024. A potential supplementary source has been identified and is being explored by the Water Company.
7/34/09/*G/0139	P Boardman & N Coller		Application has been made for a new Surface Water winter abstraction to supply a new storage reservoir.
7/34/09/*G/0101	J A Paterson & Co. Ltd		Application has been made for a new Surface Water winter abstraction to supply a new storage reservoir.
7/34/09/*G/0094	R & J M Place Ltd		A new storage reservoir filled by captured rainfall is complete and in due course this will be complimented by a second reservoir to be filled from new SW winter abstractions, for which applications are currently being determined.
7/34/09/*G/0086	R & J M Place Ltd	Vary the licence to remove 63,600 m ³ a year for the purpose of spray irrigation with effect from 1 October 2024 Revoke the licence with effect from 1 October 2026	
7/34/09/*G/0045	Rumford Ltd	Vary the licence to remove 68,490 m ³ a year for the purpose of spray irrigation from point B with effect from 1 October 2024 Vary the licence to remove 22,987 m ³ a year for the purpose of spray irrigation from point A with effect from 1 October 2026 Time limit the remaining licence to expire on 31 March 2030	None proposed (plans to maximise irrigated crops against quantity of water remaining on licence, and/or switch to non-irrigable crops).

What will the proposed licence changes achieve?

Together with the other licence changes we intend to make, these changes will help to restore base-rich groundwater flushes and surface water flows within SAC fenland habitats across all four SSSIs, with the aim of reversing deterioration of fen quality. They will also improve river flows through the *Eutrophic lake* SAC feature of Barton Broad (within the Ant Broads and Marshes SSSI) to improve resilience against tidally-influenced saline incursion events that can be particularly damaging to these sensitive habitats.