



ESSEX & SUFFOLK  
WATER



# Water resources for the future - the Abberton Scheme





# New waters run deep

In an average year, around 70% of the water supplied in the Essex area is sourced from within the county. This water is obtained almost entirely from two large pumped storage reservoirs, Hanningfield - on the outskirts of Chelmsford, and Abberton. These are both filled from local rivers with the remaining 30% imported from outside the county.

In a dry year, up to a third of the water needed to supply Essex comes from the Ely Ouse to Essex transfer scheme (EOETS) which transfers water from Denver in Norfolk via water courses, pipelines and pumping stations to the Rivers Stour and Blackwater. It is then abstracted for transfer to Abberton and Hanningfield reservoirs.

Demand in Essex is predicted to rise by around 6% over the next 25 years, almost entirely due to an increase in population.

Combine this growth with a typically dry climate – Essex on average receives half the national average rainfall – and the need for a long-term and sustainable increase in water resources is clearly apparent.

Essex & Suffolk Water started the planning, environmental studies and consultation process for additional water in 1993. Enlarging the reservoir at Abberton so it could capture and

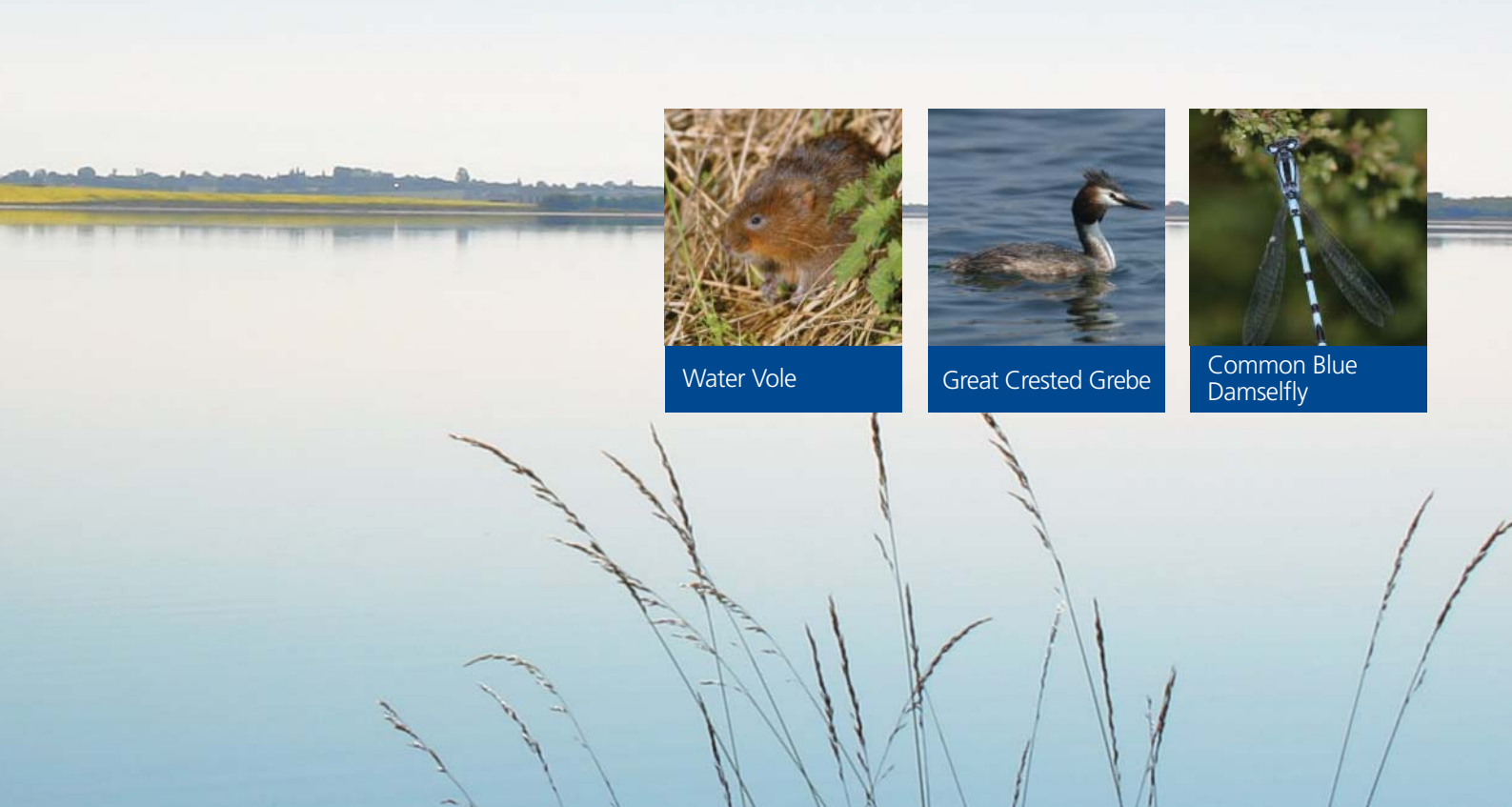
store an increased volume of water was the most viable option from an environmental, engineering and economic perspective.

## The reservoir

Situated in a scenic part of the Essex countryside, Abberton Reservoir is the largest freshwater body in Essex with 472 hectares covered by water. The reservoir was constructed during the 1930s and completed by 1939. As now, the reservoir was filled with water from local rivers including Layer Brook, Roman River and the River Stour.

Abberton Reservoir has developed into one of the most important sites in Britain for wildfowl, particularly as an overwintering habitat. The reservoir is a RAMSAR site (wetland of international importance for birds), a Special Protection Area, (designated under the EU Birds Directive) and a Site of Special Scientific Interest (SSSI), also because of the wildfowl.

The company works in partnership with English Nature, Essex Wildlife Trust and other organisations who support us in ensuring this resource is managed in a responsible and sustainable manner. Essex Wildlife Trust runs the visitor centre at Abberton, partly funded by the company in conjunction with Colchester Borough Council.



Water Vole



Great Crested Grebe



Common Blue Damselfly

## The best option

The enlarged reservoir will have a significantly lower impact on the local environment than if an entirely new reservoir were to be built. The close proximity of the Layer treatment works, already used to treat the reservoir water for customer supply, will minimise the need for additional buildings near the reservoir.

Extending the reservoir will provide an additional area of sheltered, shallow water margins for wildlife, particularly birds. The existing visitor centre will need to be relocated, which will allow for improved facilities for visitor and community enjoyment.

## Consultation, investigation, communication.....

During the early stages of investigation, Essex & Suffolk Water considered over 250 possible sites throughout East Anglia for a new reservoir. The final decision to enlarge Abberton included careful assessment and consultation on how the additional water to fill the new or enlarged reservoir would be sourced.

Those immediately affected by the Abberton Reservoir plans have been consulted over a number of years. A more widespread communications programme was introduced in the autumn of 2005, by which time Essex & Suffolk Water's proposals were being finalised and the timings for the project becoming clearer. Information sessions, displays, newsletters, media contact, website, updates and public meetings have all been used as part of the company's communications plan.

For a detailed list of who we have consulted (and continue to do so), please turn to page 11.



# Where the additional water is coming from

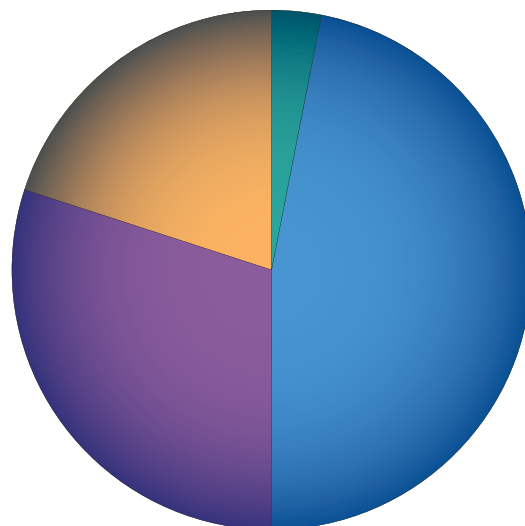
During dry conditions, no additional water is available within Essex to supply the county. Essex has relied on transfers of water from the Ely Ouse in Norfolk to fill its reservoirs since the 1970s, during very dry periods.

The Environment Agency currently transfers water from Denver in Norfolk to Essex when it is needed to fill Abberton and Hanningfield reservoirs via the Ely Ouse to Essex Transfer Scheme (EOETS). Under the scheme, surplus water which would otherwise be lost to the Wash, is transferred to Essex.

Currently, water from the EOETS meets the following proportion of the demand in Essex:

<b>Wet year – none required by Essex &amp; Suffolk Water</b>
<b>Average year – up to 7%</b>
<b>Dry year – 15% to 35%</b>

Due to current pumping and storage constraints, Essex & Suffolk Water cannot always fully utilise water when it is available in the River Stour. The enlarged reservoir and the additional intake from the River Stour at Wormingford will provide the opportunity to abstract and store additional water from the River Stour during high flow conditions which usually occur during the winter.



- Unsupported Essex rivers 47%
- Ely Ouse to Essex Transfer Scheme 30% (in dry years)
- Bulk Supply import from Thames Water to Chigwell 20%
- Groundwater 3%

The Denver Complex



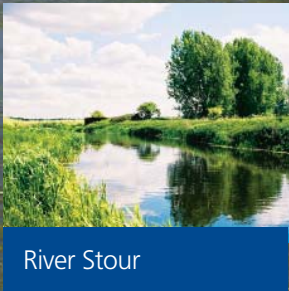


It is proposed to vary the Environment Agency's abstraction licences at Denver and Blackdyke in Norfolk, which control the amount of water transferred to Essex. This will provide the additional water required for transfer to fill an enlarged Abberton Reservoir.

A detailed study of the possible effects of the change in volume of water transferred has been ongoing since 1996.

In 1964, a Ministry of Housing study highlighted future problems with water supply due to expansion, development and the population increase anticipated in the south Essex area. The solution was to transfer surplus water from the Ely Ouse to Essex rivers, thereby increasing their flows and making extra water available. The Denver complex is managed by the Environment Agency as part of its flood defence system.





River Stour

# Transferring the water to Abberton Reservoir

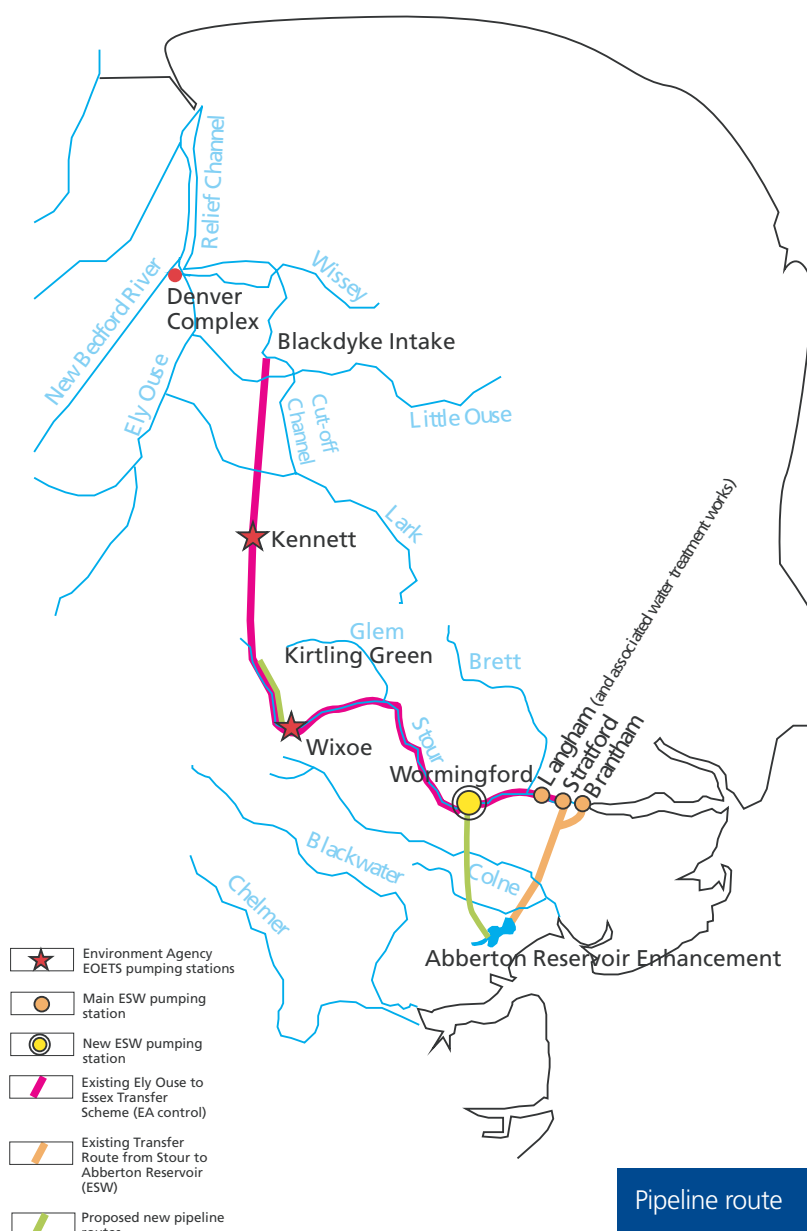
Water is currently brought from Norfolk to Abberton and Hanningfield reservoirs through a number of large pipelines and by using rivers.

In order to transfer additional water to Abberton Reservoir, the existing system needs to be updated. This will involve a new pipeline which will run parallel to the upper Stour and extra pumps at Kennett pumping station.

We plan to lay two underground pipelines, one from Kirtling Green in Suffolk to Wixoe on the Essex/Suffolk border where the additional water will be put into the River Stour. The second, is from Wormingford, Essex, where the additional water will be abstracted from the river and transferred to Abberton Reservoir. Each pipeline will be 1200mm diameter and approximately 16kms long.

The route to enhance existing transfers has been chosen as the most beneficial after examining a number of different options. The possible effects on the River Stour and pipeline routes are being thoroughly investigated by consultants working for Essex & Suffolk Water.

A more detailed pipeline route can be seen on our website [www.eswater.co.uk](http://www.eswater.co.uk). Or call **01245 212862** for a copy.



# Enlarging the reservoir

The proposal is to raise the main dam and top water level of the reservoir by 3.2 metres. This will provide an additional 60% of raw water storage, but will require far less additional land than a new reservoir. The surface area will be increased from 4.7 square kilometres to 6.7 square kilometres.

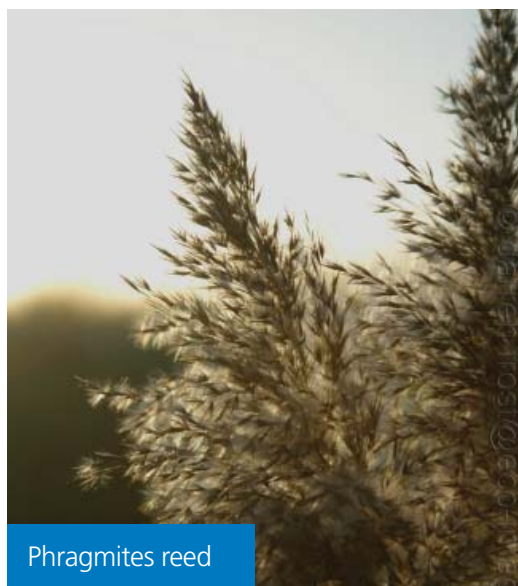
As well as raising the main dam, the enlargement will involve:

- building a number of smaller col dams around the edge of the reservoir.
- relocating the Essex Wildlife Trust visitor centre to a larger site
- diverting the B1026 and raising the causeway

Given the importance of the reservoir as an internationally important wetland site, it is essential that the habitat there is protected before, during and after construction.

Essex & Suffolk Water is working closely with English Nature, Essex Wildlife Trust and the RSPB to enhance the reservoir as part of the Scheme. The enhancement proposals incorporate areas of shallow water as habitat for feeding waterfowl, as well as other measures – including concrete removal – that are intended not just to maintain but to increase the reservoir's value for wildfowl.

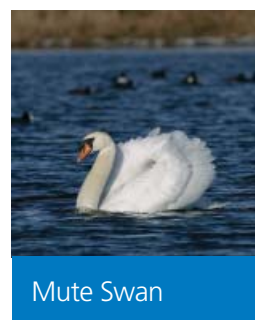
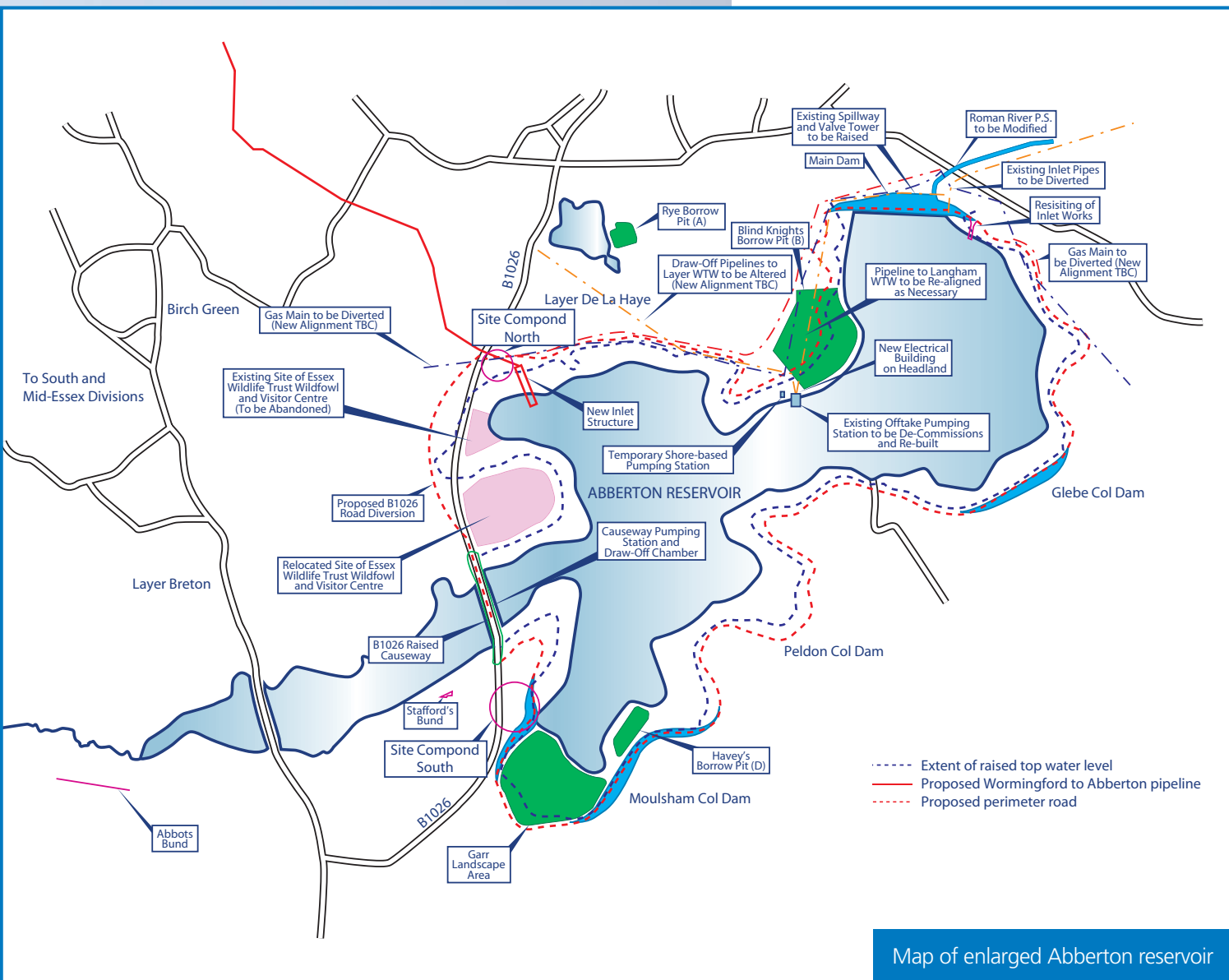
Opportunities for outdoor recreation and access to the reservoir which will not have a negative effect on the wildfowl population are being explored with relevant stakeholders.



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## Supporting the community

Essex & Suffolk Water has set up the Abberton Scheme Community Fund to enable local voluntary or community organisations to apply for a grant. Managed by the Essex Community Foundation, the fund was launched in May 2006 and will focus on environmental, social and charitable activities in areas affected by the enlargement of the reservoir. It's the company's way of saying 'thank you' for the co-operation of these communities.



Local groups benefit from the Abberton Community Fund

## Timescales

These are approximate and clearly depend on the outcome of the planning application and requirements of the Secretary of State.

Spring 2007	Submit planning applications for the Abberton Scheme
2008/9	Decision
Summer 2009	Work starts on pipelines to carry water to Abberton
Winter 2010	Pipelines completed
2010	Construction work begins at reservoir
2013	Enlarged reservoir starts to receive water
2014	Reservoir fully operational

## How to find out more

Our website is regularly updated to carry news about the Abberton Scheme. [www.eswater.co.uk](http://www.eswater.co.uk)

If you would like us to send you information as it is produced (about twice a year), please email [donna.aylett@eswater.co.uk](mailto:donna.aylett@eswater.co.uk) and she will add your name to the circulation list. Our telephone number for enquiries is **08457 820 999**





## Who we've been talking to...

Abberton & Langenhoe Parish Council  
Aldham Parish Council  
Anglian Water Services  
Associated British Ports  
Babergh District Council  
Birch Parish Council  
Bluntisham Parish Council  
Braintree District Council  
The British Association for Shooting & Conservation  
British Canoe Union  
British Horse Society  
Byways and Bridleways Trust  
Cambridgeshire County Council  
Cambridgeshire Wildlife Trust  
Campaign for the Protection of Rural England  
Country Landowners Association  
Colchester BC  
Colne Parish Council  
Countryside Agency  
Dedham Vale and Stour Valley Project  
Defra  
Denver Parish Council  
Department for Communities and Local Government  
Downham Consortium of Internal Drainage Broads  
Downham Market Town Council  
East Cambridgeshire District Council  
Eastern Sea Fisheries Joint Committee  
Earith Parish Council  
Eight Ash Green Parish Council

Ely Parish Council  
English Heritage  
English Nature - Beds, Cambs. & Northants. Local Team; Essex Team; Norfolk Team; Suffolk Team; Maritime/Land Use Planning Environment Agency  
Essex County Council  
Essex Wildlife Trust  
Feltwell Parish Council  
Fenland District Council  
Fordham Parish Council  
Forest Heath District Council  
Great Bradley Parish Council  
Great Ouse Boating Association  
Great Thurlow Parish Council  
Great Wratting Parish Council  
Huntingdon District Council  
Highways Agency  
Hilgay Parish Council  
Inland Waterways Association  
Kedington Parish Council  
King's Lynn Conservancy Board  
King's Lynn Consortium of Internal Drainage Boards  
King's Lynn Fishing Industry Co-operative Ltd  
King's Lynn Vessel Owners & Skippers Association  
King's Lynn & West Norfolk BC  
Kingston Marine  
Layer de la Haye Parish Council  
Littleport Parish Council  
Little Bradley Parish Council  
Little Downham Parish Council  
Little Wratting Parish Council

Manea Parish Council  
Middle Level Commissioners  
Nayland and Wissington Parish Council  
NFU – Eastern Area  
Norfolk Anglers & Conservation Association  
Norfolk County Council  
Norfolk Wildlife Trust  
Ramblers Association  
River Stour Trust  
Royal Yachting Association  
RSPB (Eastern Regional Office, Ouse Washes Reserve and Snettisham Reserve)  
South Holland Internal Drainage Board  
Stanway Parish Council  
St Edmundsbury District Council  
Stoke Ferry Parish Council  
Suffolk County Council  
Suffolk Preservation Society  
Suffolk Wildlife Trust  
Sutton Parish Council  
Watlington Parish Council  
Welney Parish Council  
Wiggenhall St Germans Parish Council  
Wiggenhall St Mary Magdalen Parish Council  
Wildfowl & Wetland Trust  
Wixoe Parish Council  
Wormingford Parish Council  
...and others

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[www.eswater.co.uk](http://www.eswater.co.uk)

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