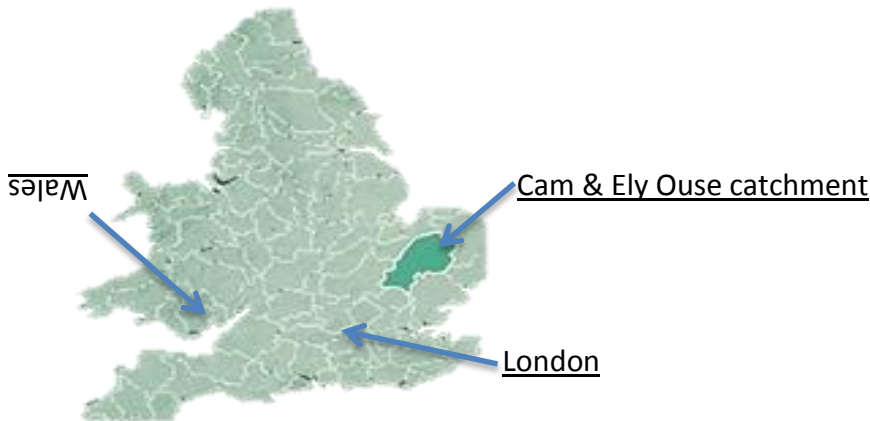

INTCATCH 2020

River Great Ouse - Cam and Ely Ouse Catchment information

Where in the UK is the catchment?



Background information

The River Great Ouse forms the backbone of the catchment, with three of its four main tributaries, the Lark, the Little Ouse and the Wissey, branching out into the north and the River Cam and its tributaries dominating to the south of Cambridge, draining an area of approximately 3,600 square kilometres.

The Geology

The catchment is characterised by East Anglian Chalklands in the south, Brecklands in the north and the South Level fenland to the west, being dominated by rural areas including high-grade agricultural land.

The main urban areas are Cambridge, Royston, Saffron Walden, Newmarket, Bury St Edmunds, Ely and Swaffham. The catchment also supports a number of nationally and internationally important water-related sites.

Water Supply

There are two important aquifers in Cam and Ely Ouse; the largest is the Chalk, which underlies the eastern and central part of the area and is primarily exploited for public water supply and spray irrigation. The other principal aquifer, Lower Greensand (Woburn Sands), is separated from the Chalk by a layer of Gault Clay. Despite being significantly smaller than the Chalk aquifer, Lower Greensand remains locally important for the provision of drinking water.

CAMEO sub catchments:-

- Cam lower
- Wissey
- Cam Rhee & Granta
- Lark
- South level & cut-off channel
- Little Ouse & Thet

Catchment Issues:

- Physical modification – flood defences, weirs, land drainage and navigation modifications.
- Pollution from wastewater - nutrients (phosphorus, nitrates, ammonia, bacteria and other chemicals).
- Urban diffuse Pollution (towns, cities & transport)– oil, chemicals and organic debris.
- Increased water abstraction leading to low flows versus increased run off from development.
- Invasive non - native species – Crayfish, Himalayan balsam and floating pennywort.
- Pollution from rural areas- soil and sediment, phosphorus, nitrate from fertilisers and bacteriological contaminations from animal faeces run-off.
- Pesticides including Metaldehyde.
- Discharges from semi residential and pleasure boats into the river.
- Ageing sewerage and flood defence infrastructure.
- Poor land management impacts on Biodiversity and causes silting of the river.
- Upper brooks / streams run dry by mid summer.
- Road run-off and storm discharges.
- Population increase – more people using the river for boating, canoeing or rowing.
- Increased development in the flood plains.
- Climate change – temperatures will continue to rise, increased winter rainfall, more intense storms and continuing sea level rise. Impacts river flows, water quality and ecosystems.
- Groundwater pollution – nitrate.

Water Framework Directive (Wfd) results for the Cam & Ely Ouse catchment

For each of the sub catchments we have picked out 5 of the key parameters that are measured for Wfd to show you where we have a High (near natural conditions) classification or through to bad (Severe change from natural conditions) classification.

Cam Lower: *This part of the river has been heavily modified and exploited over the years and now faces a few water quality challenges and pressures. This part of the river is popular for canoeing and rowing.*

Sample point	Ammonia	Dissolved Oxygen	Phosphate	Ph	Temp
Cherry Hinton Brook	Poor	Poor	Good	High	High
New River	High	High	High	High	High
Bin Brook	High	High	Poor	High	High
Hobson's Brook	High	Good	High	High	High
Burwell Lode	High	Good	Moderate	High	High
Stow Cum Quy Fen					
Cam	Good	High	Poor	High	High
Soham Lode	High	High	Moderate	High	High
Bottisham Lode - Quy Water	High	High	Poor	High	High
Swaffham - Bulbeck Lode	High	High	Poor	High	High
Bourn Brook	High	Good	Poor	High	High

South Level & Cut off channel: *Mainly rural catchment, the environment consists of high- level rivers and low level drains. The area is mainly rural with the city of Ely at the centre. Agriculture is the main land use. During wet periods, water is pumped into the high level system to help land drainage and prevent flooding, and during the summer, water is transferred back into the low level system for irrigation.*

Sample point	Ammonia	Dissolved Oxygen	Phosphate	Ph	Temp
Old West River	High	Bad	Moderate	High	High
Ely Ouse (South Level)	Good	Good	Moderate	High	High
Cut-off Channel	High	Good	Good	High	High
Upware North Pit					

Wissey: The area is mainly rural, with the market towns of Swaffham and Watton in the east and the village of Stoke Ferry in the west. Agriculture is the main land use with cereals as the major crop. The value of these crops means, in summer, up to 14% of the arable area may be irrigated using water from the river or groundwater. The catchment is a key water source for public water supply and irrigation.

Sample point	Ammonia	Dissolved Oxygen	Phosphate	Ph	Temp
Stringside Stream	High	Good	High	High	High
Gadder	High	Good	Good	High	High
Wissey - Upper	Good	High	Poor	High	High
Thompson Water	High	High			
West Tofts Stream	High	Moderate	High	High	High
Old Carr Stream	High	Good	High	High	High
Thompson Stream	High	High	Good	High	High
Watton Brook	High	Good	Poor	High	High
Wissey - Lower	High	High	Moderate	High	High

Cam Rhee & Granta: The catchment is predominantly rural with an agricultural land use. It has important wetland Sites of Special Scientific Interest. The rivers and tributaries are important for priority biodiversity species including white-clawed crayfish, otter, water vole and brown trout.

Sample point	Ammonia	Dissolved Oxygen	Phosphate	Ph	Temp
Mill River	High	High	Poor	High	High
Cam (US Newport)	High	Bad	Moderate	High	High
Cam (Audley End to Stapleford)	High	High	Poor	High	High
Rhee (DS Wendy)	High	High	Poor	High	High
Mel	High	High	High	High	High
Rhee (US Wendy)	High	High	Poor	High	High
Tributary of Rhee	High	High	High	High	High
Slade	Good	Good	Poor	High	High
Wicken Water	High	High	High	High	High
Tributary of Cam	High	Bad	Moderate	High	High
Cam (Newport to Audley End)		High		High	High
Debden Water					
Shep	High	High	Good	High	High
Granta	High	High	Poor	High	High
Wendon Brook	High	Good	High	High	High
Hoffer Brook	High	High	High	High	High
Cam (Stapleford to Hauxton Junction)	High	High	Poor	High	High
Whaddon Brook	Good	Good	Poor	High	High

US Newport)	High	Bad	Moderate	High	H
Audley End to Stapleford)	High	High	Poor	High	H
DS Wendy)	High	High	Poor	High	H
	High	High	High	High	H
US Wendy)	High	High	Poor	High	H
ary of Rhee	High	High	High	High	H
	Good	Good	Poor	High	H
n Water	High	High	High	High	H
ary of Cam	High	Bad	Moderate	High	H
Newport to Audley End)		High		High	H
n Water					

Lark: The catchment is mainly rural with a number of small villages and market town Bury St Edmonds. A mosaic of habitats are present along some of the river valleys, many are protected sites. The catchment is biodiverse with local, national and internationally protected habitats and species such as trout; eels, otters and water voles.

Sample point	Ammonia	Dissolved Oxygen	Phosphate	Ph	Temp
Kennett - Lee Brook	High	High	High	High	High
Kennett-Lee Brook	High	Good	Moderate	High	High
Lark (Abbey Gardens to Mildenhall)	High	High	Moderate	High	High
Lark downstream of Mill Street Bridge	High	Good	Moderate	High	High
Culford Stream	High	High	High	High	High
Linnet	Poor	Bad	Poor	High	High
Lark (US Hawstead)	High	High	Good	High	High
Hawstead Tributary	High	High	Poor	High	High
Lee Brook	High	Good	Poor	High	High
Cavenham Stream	High	High	High	High	High
Lark (Hawstead to Abbey Gardens)	High	Good	Poor	High	High
Tuddenham Stream	High	High	Poor	High	High

Little Ouse & Thet: This catchment is characterised by Breckland and woodlands with varied land use including forestry and agriculture. The catchment is important for local, national and internationally protected species and habitats including Eel, Otter and Water vole as well as one of the few remaining populations of the native white-clawed crayfish within the River Thet.

Sample point	Ammonia	Dissolved Oxygen	Phosphate	Ph	Temp
Little Ouse (US Thelnetham)	Poor	Bad	Good	High	High
Little Ouse (Thelnetham to Hopton Common)	Poor	Bad	Good	High	High
Little Ouse (Sapiston Confluence to Nuns' Br)	High	Good	Moderate	High	High
Little Ouse (Hopton Common to Sapiston Confl)	High	Poor	Moderate	High	High
Thelnetham Brook	High	Moderate	Moderate	High	High
Thet (US Swangey Fen)	High	Moderate	Moderate	High	High
Thet (DS Swangey Fen)	High	High	Moderate	High	High
Stow Bedon Stream	High	High	Good	High	High
Larling Brook	High	Good	Good	High	High
Old Buckenham Fen Mere					
Little Ouse River	High	High	Moderate	High	High
Whittle	Good	High	Poor	High	High
Sapiston River	High	Good	Poor	High	High
Buckenham Stream	Good	High	Moderate	High	High
Stowlangtoft Stream	High	Bad	Poor	High	High
Hopton Brook	High	Moderate	Poor	High	High
Sapiston	Good	Good	Poor	High	High
Pakenham Stream	High	Bad	Poor	High	High
Stanton Tributary	High	Moderate	Bad	High	High