The Eye

The annual publication of the Eye Brook Community Heritage Project

Introduction

We are able to bring you another issue of The Eye, thanks this time, to support from the Environment Agency. In this issue, there is news of the recently published book arising from the project, to which numerous local people have contributed. It is a great example of how local people can pool their wide ranging knowledge and resources to achieve something special and of real relevance to those of us living in the Eye Brook catchment.

The book marks the end of the funding from the Heritage Lottery Fund, but it is far from the end of the project. In this issue we bring you news of some recent developments and invite your ideas for further activities. In particular, we explore the place of the Eye Brook in the Welland River Basin and introduce the newly formed Welland Rivers Trust.

Eyebrook Reservoir from the north

Contents **Issue 5**

Page

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heritage lottery fund

Game & Wildlife CONSERVATION TRUST
The Allerton Project

The Eye Brook Book

Exploring a Productive Landscape: from a long history to a sustainable future in the Eye Brook catchment

This 148 page hard cover book covers the history of human activity in the Eye Brook catchment from the Neolithic period about 5,000 years ago to the present day. It describes the current land use and wildlife of the area, and explores future options for the management of the land on which we ultimately all depend. The book has numerous colour photographs and maps, as well as local photos from the 1930s and '40s.

Introduction

Provides the background and sets out the following chapters.

Chapter 1 – Eye Brook history

This chapter explores the history of our management and use of the local land from the very first residents of the catchment, through medieval times, to the 18th and 19th centuries. The landscape itself combines with archaeological and documentary evidence to provide a rich picture of the way we have used farmland, woodland, water and wildlife.

Chapter 2 – The Eye Brook community in transition: the 1930s and '40s

The 1930s and '40s represent a time of considerable transition because of the impacts of World War II, and the increasingly rapid adoption of fossil fuels. Elderly residents recall, in their own words, a time in which most resources were still sourced locally. The subsequent changes in the way we live have been enormous.

Chapter 3 – The Eye Brook catchment today

We are now more isolated from the land than we ever have been, but the need to understand our dependency on it has never been greater. This chapter provides information on how the land is managed today. Scientific research carried out in the Eye Brook catchment, especially by the Allerton Project, provides an insight into the relationship between the management of land for food, the wildlife associated with that land, the management and wildlife of woods, and the stream itself which flows through this diverse landscape.

Chapter 4 – The Eye Brook catchment in future

The combination of historical, local and scientific knowledge described in the previous chapters helps to inform our understanding of possible future considerations for sustainable land management. What sort of landscape do local people want to see, and what do they want from that landscape? Could we feed ourselves through local production of food from the land around us? Could that land provide for our energy needs? What consideration should be given to wildlife? These are some of the questions answered in this chapter.

Chapter 5 - Conclusions

This chapter draws the information from the previous chapters together and summarises the main findings of the project in a way that is relevant to the community as a whole, and to each of us individually. It also highlights the relevance of this work to policy more widely.

The book ends with a bibliography, providing further sources of information for each chapter.

To buy your copy of the book, priced at £10:

- Visit local book shops
- Visit Tilton or Great Easton village shop
- Contact Natalie Augusztinyi at the Allerton Project: 01572 717 220 or naugusztinyi@gwct.org.uk

Historic Book Extracts

Stoke Dry Bridge

The bridge on the road from Stockerston to Stoke Dry has been considerably wetter since it was flooded when Eyebrook Reservoir was first filled in 1940.

The bridge made a brief return to a dry state in the hot summer of 1976 when drought lowered the level of the reservoir water and many people had

The bridge in the 1930s...

...and in 1976.

to use stand pipes to obtain their household water. We may be seeing Stoke Dry bridge again before long. Most of the warmest years in recorded history have been recent ones and predictions are that hot dry summers will become more frequent in future.

Water in the 1940s

Extracts from an interview with Jean Graythorpe provide an insight into the use of water and the stream at the lower end of the catchment in the 1940s.

We had a pump — spring water — in the farmyard across a cobbled yard. We had to carry two buckets of water [each day]. *My dad used to, and then we did when we got bigger. It was a lovely spring —beautiful water to drink. We used to hold our heads under the pump and pump water into our mouths. It was lovely.*

[For the dairy cows,] *we had a big concrete trough with a pump and it was good exercise! We'd all take it in turns till we were out of breath. We pumped up gallons of water because the cows were standing around this big eight foot trough sucking the water up while we were pumping it in. We didn't mind this at all. It was hard work I suppose but we liked it.*

We used to play in the brook and in the fields. We used to get four poles and Dad would run them in the ground for us and we used to get four or six corn sacks that he used to give us and we used to sew them together to make a tent. We would take sandwiches and a flask out and have picnics in the fields. I only fell in the brook once.

I used to go for walks with my grandparents to see how the reservoir dam was getting on. It was obviously quite a big thing to them to see that the little brook was feeding quite a good sized reservoir, so you can understand why they went for walks to watch it being built. I think [local people] *liked it. It was mainly an agricultural village, and nobody objected, because it was making use of the water really wasn't it?*

Bridge over the stream at the site of the reservoir dam.
Photos courtesy of Chris Race.

Wildlife & Farming Extracts

Fresh Air

In Eye Brook woods, tree canopies that are well-lit have the largest and most obvious lichens including the grey tassels of *Evernia* species. These become obvious to walkers when high winds bring down branches. Rarer species occur on tree boles near to ground level, and include species previously thought to be extinct in the Midlands. The most noteworthy are on the bark of large hazel and ash trees. These lichens seem to have been common in the Midlands up to mid-Victorian times, but the rise in industrial air pollution, especially sulphur dioxide, effectively fumigated local woods, as it did in other parts of the country.

Since the 1980's the lichens have been coming back as the sulphur dioxide concentration in the air throughout Britain has declined to less than 1% of its 1960s levels. Strangely, only young trees support these returning lichens. Perhaps pollutants remain in the bark of older trees, inhibiting new lichen colonization.

In the well-lit areas of woods, especially at the field margins, lichens known to be nitrogen-loving are dominant. Many are eye-catching, such as those that turn elder twigs bright orange. Increased use of nitrogen fertiliser in arable and livestock systems, indoor livestock units, and increased traffic along the A47 and the other roads through the catchment, all contribute to high concentrations of ammonia and nitrogen oxides in the air. While the latter are major greenhouse gases (contributing to climate change), both ammonia and nitrogen oxides enrich the surrounding landscape with nitrogen. So lichens have been affected both by industrial air pollution many miles away, and by farming practices and motorists nearby. They provide a valuable indicator of how we, collectively, are affecting our air.

Information provided by Ivan Pedley

Photo: J Szczur

As well as being an indicator of air quality, the oils from this lichen (Evernia prunastri) are used as "fixatives" for scents. This species was dried and crushed and used as wig powder when such items were in fashion, and it also deterred head lice due to the chemical compounds it contains. It was also used in ship biscuits to deter weevils!

Wheat

Wheat is the main arable crop and is sown in the autumn and harvested in August for animal feed, biscuit flour, and for bread flour where the variety and quality are good enough. It is grown in rotation with other crops to reduce the establishment of associated pests, weeds and disease. Wheat is normally sold to dealers in the general market with little if any connection between the producer and consumer, but much of it probably ends up being processed locally as there is a flour mill and a gluten factory at Corby, and a Weetabix factory at Burton Latimer. Wheat grown with reduced pesticide use at Loddington is sold as 'Conservation Grade' for products such as Jordan's cereals.

Photo: A Butler

Future Scenario Extract

Can We Feed Ourselves?

With food security and carbon emissions currently high on the policy agenda, a project recently carried out by MSc student, Rebecca Granatstein investigated the capacity of an Eye Brook parish to feed itself from locally produced food. Tilton on the Hill has a population of about 530 and the parish area is 609 hectares (1,506 acres). Based on national food consumption statistics and yields for current farming methods, this would require a minimum area of about 83 hectares (205 acres) to feed the parish population. That is about 14% of the Tilton parish area. Tilton could currently feed itself very easily.

Local apple variety Annie Elizabeth which can be stored through to the spring.

However, it would require a change in diet, with no bananas or oranges for example! 78% of the 76 respondents agreed to some extent that local food production might benefit the community, but only 3% said that they would be prepared to give up imported fruit. There is clearly a conflict between the benefits to the individual of diversity and convenience associated with imported fruit and the long term considerations of wider society. There has also been a loss of fruit varieties and the knowledge of storage methods used to prolong the availability of locally produced fruit beyond the harvesting period.

If Tilton was to feed its share of the urban population, the land area needed increases to at least three quarters of the parish area, leaving less than a quarter of the area for houses, roads, streams and woodland. Given a rapidly increasing population, locally and globally, the pressure on land is becoming apparent.

The most land-hungry types of food are meat and dairy products. If the use of these is cut to a bare minimum, perhaps only eating meat at times of celebration, and dairy products less often than we currently do for example, then the land area needed to provide food would be reduced by about 30%. In the Tilton survey, there was considerable unwillingness to adopt a low meat diet. 16% were already on a low meat diet, and 5% would consider changing, but 40% would consider only some moderate change in meat consumption, and a further 40% would not consider any change at all.

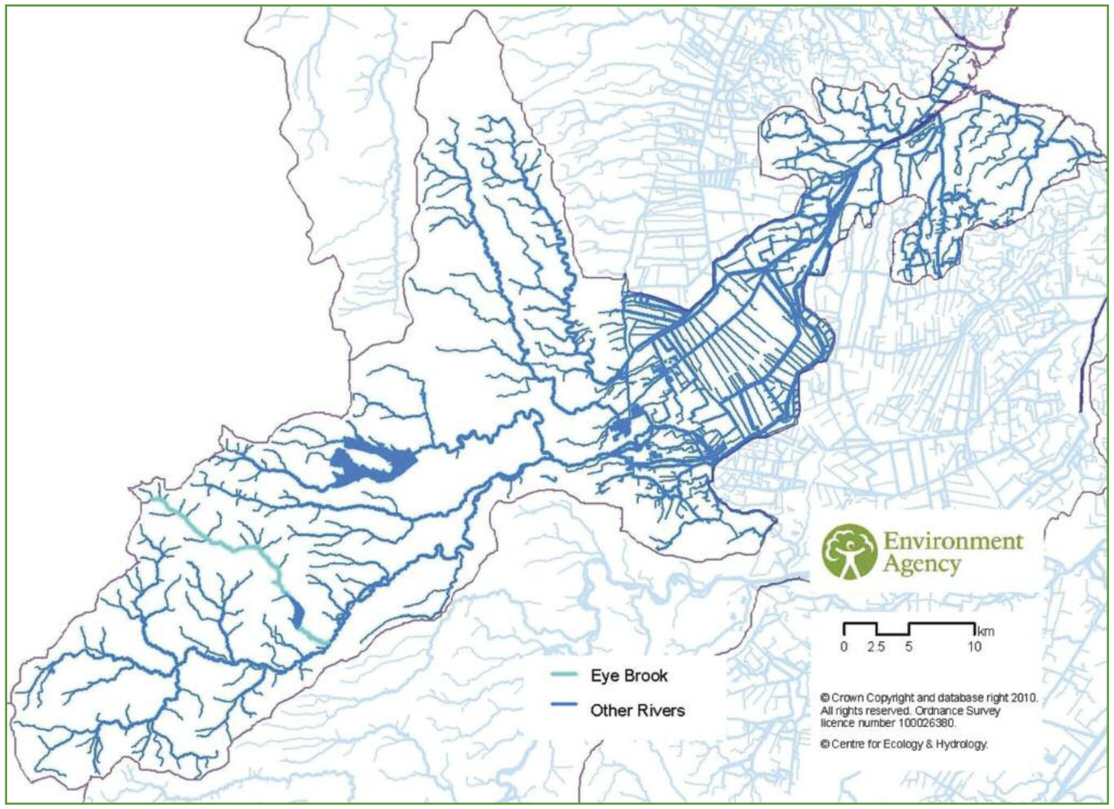
Current highly productive farming means that a large population can be fed from a much smaller area than was the case just half a century ago. However, increases in crop yields have slowed in the past decade and could even decline if inputs cannot be maintained because of limited availability or high price, or regulatory restrictions for other reasons.

As oil prices rise, the price of synthetic textiles is likely to do the same, and there is already a developing interest in the production of plant fibres such as hemp and flax which would require additional land. Increasing demand for biofuels also puts additional pressure on the land. New approaches to farming need to be developed to maintain, let alone increase yields, but there is also a role for us as individuals to consider our impact on the local landscape and its ability to support a growing population in future.

Thank You

A big 'thank you' to the many people from throughout the catchment who have contributed in any way to the book. About forty local people have contributed directly to the text and others have helped in other ways, such as providing photographs. The book also draws on research carried out by staff from the Game & Wildlife Conservation Trust's Allerton Project at Loddington, and from other research organisations from outside the catchment, such as ADAS, the Centre for Ecology and Hydrology, the Royal Society for Protection of Birds, and Pond Conservation. There are also research results from staff and students from the Universities of Cranfield, Imperial College, Reading, Lancaster, Leeds, Leicester, Nottingham and University College London.

The River Welland



The River Welland, showing the location of the Eye Brook.

The River Welland

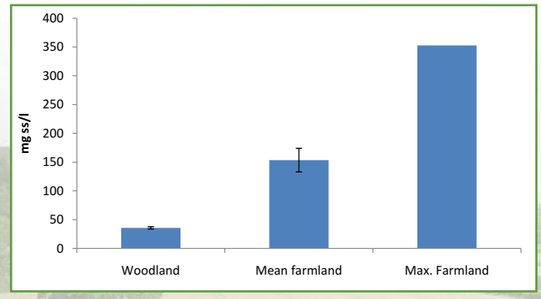
The Eye Brook is a headwater tributary of the river Welland which passes through Stamford and enters the Wash near Boston. The Wash is the UK's largest estuary, its most important shellfish producing area, an important breeding site for many of the fish on which our coastal fisheries depend, and a key site for countless migratory wading birds. In its lower reaches, the Welland passes through some of the most agriculturally productive land in the country.

Welland Sediment Project

Sediment enters the Welland and its tributaries from a number of sources and is perhaps the most widespread problem for the quality of water in the river basin. As well as the physical impacts on water life such as wild brown trout, sediment blocks watercourses and increases flooding. Phosphorus, the main nutrient causing problems in freshwater, both for treatment of drinking water and for wildlife, is strongly associated with sediment particles. Sediment gets into water through erosion of farmland, especially arable land and stream banks eroded by livestock, and through other pathways such as roads. Sediment in water is most apparent when it is raining and streams become coloured, but disturbance of the stream bed also provides clear signs of sedimentation. The Environment Agency has launched a survey of sedimentation across the Welland river basin in order to identify the most severely affected sites. It will be supporting farmers to reduce their impact on water.

Eye Brook Sediment

Our knowledge of sediment in Eye Brook tributaries makes an important contribution to understanding the issue more widely. The Eye Brook is officially classified as in 'good' ecological condition, just one level below the top level of 'high', but there is considerable variation between the stream's tributaries. Sediment loads in water are highest during rain, and reflect this variation between small streams. Tributaries in woodland carry virtually no sediment, representing pristine, high quality water. In other tributaries, food production on farmland influences the sediment load, with some streams carrying high levels of sediment. This is because of site-specific pathways, rather than simply the general type of land use associated with each tributary.



Suspended sediment (ss) during rain in tributaries flowing through woodland (mean) and farmland (mean and maximum of 20 tributaries).

These findings have implications for addressing the sediment issue across the Welland river basin as a whole. It is unlikely to be possible to reduce the levels of sediment in streams flowing through land used for food production to those of woodland, but targeting the worst streams will help to bring the average levels down, benefiting the river as a whole.

Welland Rivers Trust

Welland Rivers Trust

The Welland Rivers Trust has recently been established to bring together all those with knowledge of the river and the land which drains into it. The trust is part of a national network of more than thirty rivers trusts which have been established over the past decade in order to improve the status of rivers to the benefit of all. For more information on the Welland Rivers Trust and how to get involved, visit the website at www.wellandriverstrust.org.uk .

Local Involvement

The Eye Brook starts at Tilton on the Hill and extends southeast to Eyebrook Reservoir and Caldecott. Just downstream of Caldecott it joins the River Welland which enters the Wash near Boston. The Eye Brook Community Heritage Project focuses on the past and present management of land and other natural resources such as water, woodland and wildlife, with a view to informing future sustainable management of the area in which we all live. The project combines scientific knowledge arising from research carried out in the catchment with the local knowledge of those living and working in the area. Several events have been held throughout the catchment over the past four years. Additional information has come from responses to student surveys, archaeological fieldwork, childhood memories, photographic and documentary material, and biological records, all provided by individuals with wide ranging interests in the area.

Volunteers plant trees in the old A47 as part of the Cow Pastures Trust work at East Norton. Photo: John Dyson.

George Bedford, East Norton blacksmith in the 1930s. Photo courtesy of John Dyson/ Alan Hubbard.

The Cow Pastures Trust

In the mid-seventeenth century, the medieval open field system at East Norton gave way to enclosure, with areas of land being divided up between local farmers. Some residents of the village lost out in this process and the Cow Pastures Charity was set up in 1651 when Richard Roberts, Ralph Holman, Richard Freestone and George Brushfield gave more than 12 acres of land for the poor of the village. The charity still exists. The three permanent pasture fields are in a Countryside Stewardship agreement and continue to be farmed, with hay being taken from one field each year in rotation. The hedges have recently been laid and new boundary fences have been put up. In 2007, local people restored a pond, cutting back the overhanging trees. Most recently, about 200 trees have been planted on the route of the old A47.

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Soar Valley Press
0116 259 9955
inspiration@soarvalleypress.co.uk

Game & Wildlife CONSERVATION TRUST
The Allerton Project

Contact details
Dr Chris Stoate
The Game & Wildlife
Conservation Trust
Allerton Project, Loddington,
Leicestershire LE7 9XE

Tel 0116 259 7609
Email cstoate@gct.org.uk

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