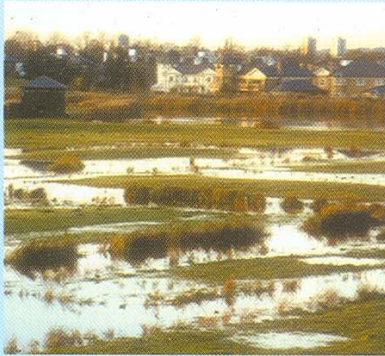




# CIWEM

The Chartered Institution of Water and Environmental Management



## WORLD WETLANDS DAY CONFERENCE 2006 LANDSCAPE SCALE WETLANDS DEVELOPING VISIONS

1 & 2 FEBRUARY · SOAS, LONDON

The current reduced and threatened status of the UK's wetlands is now well understood. The aim of this conference is to explore how the range of policies and plans are now developing recognise this and help enable landscape scale wetlands to be created and restored.

**ATKINS**



**Entec**



**water for wildlife**

This event is accredited for Continuing Professional Development under the CIWEM CPD Scheme  
Organised by **CMS - Coastal Management for Sustainability**

## Introduction

The current reduced and threatened status of the UK's wetlands is now well understood and there are a wide range of initiatives developing to restore and recreate wetlands. There is also an almost unprecedented policy opportunity created by changes to the Common Agricultural Policy, the Water Framework Directive (with catchment management and changing approaches to hydromorphology), Flood Risk Management and other areas that could enable recovery and restoration of **landscape scale wetlands**.

**The aim** of this conference is to explore how the variety of policies and plans recognise the scale of the challenge can be harnessed to enable landscape scale wetlands to be created and restored. This is a subject that has been debated for many years by a very wide range of people and is prompted by the initiation of the Water and Wetlands Vision for England project. The World Wetlands Day conference 2006 is focussing on this major challenge and how it can be taken forward across the UK. Our aim is to engage and stimulate a wide range of input into the developing process to provide answers to a host of questions.

**Key themes** have been identified in taking this forward and they form the basis for the way the conference has been structured.

1. **Habitat creation and restoration** challenges for large wetlands and for rivers – practical habitat management questions: what can we create through a visioning process? What information do we need? How can we gain a better understanding of water quality needed to support future wetlands and where is this water going to come from? How can we plan for future wetlands and ensure that our existing resource continues to be supported? How can we identify areas that link river and floodplain restoration? How can we better identify win-win scenarios for biodiversity and non-conservation priorities? How can we incorporate hydrological buffers as an important aspect of improving our wetlands in the future?
2. **Opportunities, blockages and barriers** – practical delivery questions: how to link visions with the planning process – strategic and local; what tools are needed to enable delivery of a vision – getting funds, identifying options, gaining agreement. How do we effectively engage with current spatial planning initiatives? How prescriptive should we be about aspirations? How can we go about changing hearts and minds so that water and wetlands are recognised as essential and non-threatening? We need to make best use of existing mechanisms and means to deliver information about wetland priorities – are we doing this effectively? How can we best match our wetland aspirations and plans with terrestrial land use planning, especially where there are overlaps or conflicts? How can we effectively sell the socio-economic benefits associated with enhancing and improving our wetland resource? How can we knit together local aspirations with national and regional policy? How can we ensure better ties between future wetland aspirations and opportunities that arise through flood defence schemes?
3. **Big issues** – water management and climate change. How will these issues be taken into account in a future where there is growing competition for water resources and the need to enable freshwater ecosystem adaptation under climate change? How desirable is it to restore natural wetland processes? Where can these conditions best be sited? Climate change will impact on our wetlands and future wetlands in many ways, some of which are already becoming obvious. How can we account for these in our aspirations and to what extent should we be planning on accommodating priority species movement.
4. **Reality checks with stakeholders** What sort of stakeholder engagement process is needed to minimise conflict and maximise opportunities for all? How and when can visions and plans for enhancing or altering wetlands be presented to land owners and managers to ensure constructive engagement? How can high level visioning take account of the aspirations of local projects already in existence? Identifying aspirations and feasible futures is an iterative process, how can we manage this? How do we *ground truth* our aspirations and how prescriptive can or should we be in the face of uncertainties about future water scenarios? Who are the important stakeholders when seeking to achieve large-scale wetland improvements – do we need different means to engage with different stakeholders? How do we ensure maximum buy-in from stakeholders whilst ensuring we don't lose sight of our legal obligations and aspirations?

**The objectives** of the conference are to:

- Explore the major issues of restoration and recovery of landscape scale wetlands
- Engage and provide an opportunity for inputs from a wide range of stakeholders
- Produce a range of outputs including stakeholder views from the meeting

## Programme

### February 1st

#### 14.00 London Wetlands Centre

There will be an introduction to Sir Peter Scott's vision for wetlands by **Martin Spray** (Chief Executive Wildfowl and Wetlands Trust) followed by themed walks focussing on the vision for species, habitats and people at the London Wetland Centre led by Wildfowl and Wetlands Trust staff including **Baz Hughes, Rob McInnes** and **Malcolm Whitehead**.

#### 17.30 – 20.30 Evening Wine Reception – Brunei Gallery, SOAS, London

Chairman: **Robin Green** Wardell Armstrong LLP & CIWEM President

**18.30 Visions and Action for Wetland Restoration and Recovery** **Gwynne Williams** RSPB  
**Alastair Driver** Environment Agency **Doug Hulyer** Council Member, English Nature

**19.30 Announcement of the winner of the Living Wetlands Awards**

### February 2<sup>nd</sup> Brunei Gallery, SOAS, London

#### 9.45 Session 1: Visioning wetland futures

9.45 **Introduction & Welcome to the Conference** **Robin Green** Wardell Armstrong LLP & CIWEM President  
9.50 **Visioning wetland futures- Keynote** **Phil Rothwell** Environment Agency  
10.00 **The developing vision for England** **Ruth Davis & Carrie Howard** RSPB  
10.20 **Landscape scale wetlands – a Welsh perspective** **Chris Uttley & Peter Jones** CCW  
10.40 **Wicken Fen: lessons and future challenges** **Stuart Warrington & Philip Broadbent-Yale** National Trust

#### Plenary workshops

11.00 **Theme 1. Habitat creation and restoration** - Facilitator: **Rob Williams** English Nature  
Challenges for large wetlands and rivers – practical habitat management questions: what can we recreate and what therefore should we seek in the visioning process.  
Key points to prompt discussion – key questions **Rob McInnes** WWT & **Rob Oates** WWF-UK

11.15 Plenary workshop discussion

12.00 Buffet and refreshments

12.40 **Theme 2. Blockages, barriers and opportunities** Facilitator: **Chris Rostron** Water for Wildlife  
Practical delivery questions: how to link visions with the planning process, strategic and local; what tools are needed to enable delivery of a vision – getting funds, identifying options, gaining agreement.  
Key points to prompt discussion – key questions **Laurence Tricker** Kent County Council

13.05 Plenary workshop discussion

13.40 **Theme 3. Big issues** Facilitator: **Alastair Burn** English Nature  
Water management and climate change. How will these issues be taken into account in a future where there is growing competition for water resources and the need to enable freshwater ecosystem adaptation under climate change?  
Key points to prompt discussion – key questions **Mike Acreman** CEH

13.55 Plenary workshop discussion

14.40 Sweets and refreshments

15.20 **Theme 4. Reality checks with stakeholders**  
Facilitator: **Doug Hulyer** Council member, English Nature  
What sort of stakeholder engagement process is needed to minimise conflict and to maximise opportunities for all? **Andrew Clark** NFU and **David Earle Robinson** English Heritage

15.35 Plenary workshop discussion

16.20 Overall - Concluding remarks **Doug Hulyer**

16.30 Close and Refreshments



## **RSPB/CIWEM Living Wetlands Award**

The **RSPB/CIWEM Living Wetlands Award** was established in 2003 by the two organisations to reward projects which demonstrate the multiple functions and sustainable use of wetland habitats.

To be eligible for the Award, projects must:

- contribute to the delivery of priority UK Biodiversity Action Plan (BAP) species and habitat targets for wetlands
- demonstrate sustainability and delivery of multiple benefits e.g. flood alleviation, wastewater treatment, recreation, eco-tourism, water resource security
- ensure no priority BAP species or habitats are harmed by the project

The prize consists of the Mance Memorial Trophy, publicity, a framed certificate and a cheque for £1,500, to be used to fund the delivery of further UK Biodiversity Action Plan (BAP) targets, publicity of the project and/or related education.

This year the Award has been expanded to include a prize for the best Small Living Wetland sponsored by the CIWEM East Midlands branch. The winner will receive a framed certificate and a cheque for £500.

The winner of the 2006 RSPB/CIWEM Living Wetlands Award is The Little Ouse Headwaters Project submitted by the Little Ouse Headwaters Charity

The rivers Little Ouse and Waveney have their origins in a shallow valley which marks the historic boundary between the counties of Norfolk and Suffolk.

The Little Ouse Headwaters Project (LOHP) as a Charitable Trust which aims to enhance the value of the river valley. The charity was established to promote the management of the valley as a unit, principally for wildlife benefits, but also to consider the wider landscape. Since its establishment, the project has taken on responsibility for the management of six sites within the valley totalling over 36 ha of land.

Long-term aims:

- To recreate and maintain a continuous corridor of wildlife habitat along the headwaters of the Little Ouse by: improving the wildlife diversity, restoring natural river features, and improving water quality
- To facilitate rural regeneration and land-use diversification
- To improve recreation, amenity and education value for the community
- To improve landscape quality and safeguard against flooding

Through: the re-creation of some of the valley's fens, meadows, and river meanders, the maintenance and enhancement of the existing wetland, woodland and heathland.

The LOHP is an entirely community-based project. It is managed and run by volunteers.

- Monthly work parties at the sites allow local volunteers of all ages participate in a range of practical management activities.
- Training has been provided for some of our volunteers in hedgerow survey techniques, the use of power tools and first aid.
- Volunteers from local naturalists groups and other experts have spent time at the sites making biological records to assist our site management.
- Talks are delivered about the work and the importance of the sites.
- Through out the year there is a programme of guided walks
- All of the sites managed have open access
- Information will be disseminated to visitors through local tourist information points, and leaflets on the project area.

Activities such as removal of agricultural waste, changes in land use, pollarding, scrub clearance and grazing regimes have been conducted and are already proving of benefit to UK and local BAP priority habitats and the huge range of species that they support, including BAP priority species including harvest mouse, Barbastelle Bat, turtle dove, songthrush, spotted flycatcher, marsh tit, bullfinch, and yellow hammer.

It is hoped that as a result of the projects work the wetlands created can play a key role in flood risk management, groundwater recharge, and improvements to water quality.

The winner of the small Living Wetlands Award 2006 is Scrayingham Ecological Wastewater Treatment system submitted by Yorkshire Water

The village of Scrayingham plays host to the first stabilisation pond scheme designed and built in the UK that takes combined effluent.

The system designed comprises of a series of ponds and rock filters in which all effluent is treated. Iris Water and Design used applied ecology in their design to create a natural system. Micro organisms are exploited to enhance the effectiveness of the treatment process. This process is also aided by rock filters. Effluent flows horizontally through these beds and in the process are filtered biologically reducing suspended solids.

These systems are characterised by their simple construction and operation, robust and reliable performance, low cost of operation and maintenance, high standards of effluent quality and low sludge yields.

#### BENEFITS

- No energy is required to pump the effluent from the village to the treatment works due to the gravity system therefore no power is required at the site.
- The system was designed in order that it requires minimum maintenance.
- A rich and varied wetland habitat has been created.
- No material excavated was transported away from the site.
- Local limestone was used in the rock filters.
- The water company is providing the best value for money to their shareholders.
- The number of species entering the area is increasing and expected to continue.
- The system benefits the local community by creating employment.

As a result of these processes the effluent entering the receiving river is of a high quality.

For more information please visit [www.ciwem.org/awards/](http://www.ciwem.org/awards/)

## The Flood and Coastal Erosion Risk Management Innovation Fund

### Lucy Toman

Head of Policy Support, Defra, 113 Foss House, Kings Pool, 1-2 Peasholme Green, York, YO1 7PX  
Tel No: 01904 454485 Fax No: 01904 455016 Email: [lucy.tomas@defra.gsi.gov.uk](mailto:lucy.tomas@defra.gsi.gov.uk)

The Innovation Fund is seeking to promote innovative approaches to delivery that contribute towards the development of a more holistic and sustainable policy making in the future, by bringing in ideas and expertise from a wider range of stakeholders.

The Fund, which is worth £1.5 million over 3 years, will provide grants for projects which:

- use novel approaches to flood and coastal erosion risk management
- maximise the environmental, social and economic benefits to be gained from flood and coastal erosion risk management funding
- incorporate wider benefits in new ways
- contribute towards the development of more holistic and sustainable policy making in the future

Projects can be proposed by organisations or partnerships, which can include public authorities and groups of individuals. The project must have tangible benefits to flood or coastal erosion risk management, and provide information that can be more widely applied. As the purpose is to demonstrate how future policy should develop, projects do not necessarily have to comply with current flood and coastal erosion risk management policy. However, they must comply with all relevant legislation, including the Habitats Regulations and EU State Aids regulations.

Detailed requirements and the arrangements for submitting projects can be found in the Defra Information Pack available at the conference or on the Defra website at:  
[www.defra.gov.uk/environ/fcd/policy/strategy/innovfnd.htm](http://www.defra.gov.uk/environ/fcd/policy/strategy/innovfnd.htm)

## Turning the tanker

### Alastair Driver

National Conservation Manager, Environment Agency, Kings Meadow House,  
Kings Meadow Road, Reading, Berkshire, RG1 8DQ

Tel No: 01189 535563 Mobile: 07836 600868 Email: [Alastair.driver@environment-agency.gov.uk](mailto:Alastair.driver@environment-agency.gov.uk)

World Wetlands Day and conference events like it, are often used as a chance to highlight the sorry state of our wetlands compared with that almost mystical era "before the war". This of course entirely appropriate, but just once in a while we should look at how far we've come in trying to turn things around and take a positive look at what we are planning to do next.

As the 10<sup>th</sup> anniversary of the Environment Agency looms, we should remind ourselves of some of the successful wetland initiatives with which the organisation has been involved with many of its key partners in the last decade. These include:

- significant urban river restoration projects through the delivery of better Flood Risk Management eg R.Quaggy in South London
- major flagship wetland restoration projects eg London Wetland Centre and Otmoor
- managed realignments on the coast eg Frieston Shore, Paull Holme Strays and currently Alkborough
- integrated land and water management projects - eg Hafren Forest and New Forest

However these undoubted successes have been largely opportunistic and unrelated to any specific overall strategy. We've worked hard to change attitudes at policy level and to sell the benefits of strategic planning and funding and we now have to change fast if we are to match the expectations we are generating. For the Environment Agency this means establishing regional habitat creation programmes to deliver against regionalised BAP habitat targets, planning Flood Risk Management scheme enhancements at a catchment scale, improving our data quality and accessibility and developing and commencing delivery of the long-term vision for wetlands.

If we can sort that lot out in the next 10 years then the Environment Agency tanker will have well and truly been turned around and we will all have cause to celebrate!

## Visioning wetland futures - Keynote

### Phil Rothwell

Head of Flood Risk Management Policy, Environment Agency, Anglian Region, Kingfisher House, Orton Goldhay, Peterborough, PE2 5ZR

Direct Line: 01733 464698 Mobile: 07990 800019 Fax No: 01733 464372

Email: [phil.rothwell@environment-agency.gov.uk](mailto:phil.rothwell@environment-agency.gov.uk)

In the last 30 years public understanding of conservation has increased, growth in the membership and funding of organisations such as the National Trust and the RSPB has been impressive. Helped by lottery funding and donation, the areas of land under nature reserve management has gradually increased and changes to legislation and common agriculture policy funding have added to the mix of measures available to the wetland conservationist. And yet whilst some success stories can be written, the last 30 years have seen continued declines in the fortunes of wetland species.

If we really want to make the wetland vision a reality and do not want to wait another 30 - 60- 100 years then a different and perhaps more radical approach is required. We need much sharper focus for available funding, real and non competitive collaboration between key players, new mechanisms for managing the benefits to the public and the availability of local commercial support. The people who might make a difference are not the usual suspects, they are entrepreneurial, conjuring funds from public and private sources to enthuse local people and demonstrate the recreational, tourist, training opportunities the environment can bring. We need the people who understand how the public react, can achieve cultural change. And there are models, Operation Groundwork, Environmental City initiatives etc, build local support with local business to achieve local environmental change and then capitalise upon it. If we want to make the vision a reality then business as usual is not an option. The debate is no longer about what, it is about how.



## Developing a Wetland Vision for England

### **Ruth Davis**

Head of Water Policy, RSPB, The Lodge, Sandy, Bedfordshire, SG19 2DL  
and

### **Carrie Howard**

Water and Wetland Vision Officer, Water Policy Unit, RSPB, The Lodge, Sandy, Bedfordshire,  
SG19 2DL

English Nature, the Environment Agency and the RSPB have come together to develop a *Vision For Wetlands*. In this Vision, we are seeking, together with stakeholders, to outline the extent of the changes we wish to see in our wetland environment in 50 years time, and an indication of the kinds of locations in which we think they may be achievable.

We explain why developing a vision will be critical in bringing about the kinds of changes necessary to safeguard our existing wetlands, and to meet national and international targets. There is an almost unprecedented opportunity created by recent changes to the Common Agricultural Policy and agri-environment support, the Government's flood risk management strategy (Making Space for Water), and the introduction of the Water Framework Directive, all of which could help to enable the recovery and restoration of wetlands on a landscape scale. We will also be able to use the Vision to identify where wetlands may help us to achieve the aims of the Water Framework Directive, PSA targets for SSSIs, and contribute towards national BAP targets.

We outline here the processes we are likely to need to go through in order to develop the Vision, and the Geographical Information System (GIS) based tools that we have available to inform this.

## Landscape Scale wetland restoration in Wales

### **Chris Uttley**

Water Policy Officer

and

### **Peter Jones**

Peatland Ecologist

Countryside Council for Wales, Maes Y Fynnon, Ffordd Penrhos, Bangor, LL57 2DN

Tel No: 01248 385500 Email: [chris.uttley@ccw.gov.uk](mailto:chris.uttley@ccw.gov.uk) [peter.jones@ccw.gov.uk](mailto:peter.jones@ccw.gov.uk)

The potential and opportunity for large-scale habitat restoration is now greater than it has been for decades. Whilst tools such as the Water Framework Directive and the Habitats Directive can help push restoration in the right direction, communities living in the vicinity of wetlands will need to be fully involved if we are to realise long term landscape scale changes. Restoring wetlands is essential to the future maintenance of the aquatic environment and biodiversity. They can also help defend against sea level rise and provide opportunities for tourism, recreation and “green business” ventures. Communicating these benefits and making them happen should be viewed as a core part of restoring wetlands. Wherever feasible, wetland creation and restoration should be part of a wider and integrated rural development agenda. The Dyfi Estuary in Mid-Wales, presents the opportunity to demonstrate this, by placing the restoration of Cors Fochno (Borth Bog) in the context of an opportunity to re-designate the Biosphere reserve, so that the whole catchment is included and benefits from the designation.

## Wicken Fen: lessons and future challenges

### Stuart Warrington and Philip Broadbent-Yale

National Trust, Regional Nature Conservation Advisor, The National Trust,  
East of England Regional Office, Westley Bottom, Bury St Edmunds, Suffolk. IP33 3WD  
Tel No: 01284 747520 Mobile No: 07909 885506 Email: [stuart.warrington@nationaltrust.org.uk](mailto:stuart.warrington@nationaltrust.org.uk)  
Email: [Philip.broadbent@nationaltrust.org.uk](mailto:Philip.broadbent@nationaltrust.org.uk)

Website for the National Trust [www.nationaltrust.org.uk](http://www.nationaltrust.org.uk)

Website for Wicken Fen [www.wicken.org.uk](http://www.wicken.org.uk)

Wicken Fen in Cambridgeshire is the National Trust's oldest nature reserve. The core old fenland is 170 ha and this together with wetland restored by the Trust in the 1950s make up the designated SSSI, NNR, SAC and Ramsar site of 255ha. In 1999, the Trust embarked on a 100 year Vision to expand the reserve by 1000% to create sustainable wetlands from Wicken to Cambridge and a 'green lung' for people. The Vision has considerable impetus and since 1999 the reserve has expanded by 94% through the purchase of 317ha of farmland for restoration to wetland habitats. An important aspect of the Vision is that the wetland restoration and management will be driven by the dynamics of water levels and naturalistic, extensive grazing.

The good progress of the Vision has shown the importance of partnerships and support (EN, EA, Defra, ODPM, HLF, local Authorities, IDB, local communities). Open, full and frequent communication is essential on all sides.

Future challenges for the Wicken Fen Vision include the patchwork quilt of land ownership in the area, the complex hydrological issues of various sub-catchments, long-term funding for land management, and maintaining strong working partnerships with ever changing statutory and governmental bodies.

## **Theme 1: Habitat restoration and creation: Challenges for large wetlands and rivers**

### **Rob McInnes**

The Wildfowl & Wetlands Trust, Slimbridge, Glos, GL2 7BT

Tel No: 01453 891905 Fax No: 01453 890827 Email: [rob.mcinnnes@wwt.org.uk](mailto:rob.mcinnnes@wwt.org.uk)

and

### **Rob Oates**

WWF-UK, Panda House, Weyside Park, Godalming, Surrey, GU7 1XR

Email: [roates@wwf.org.uk](mailto:roates@wwf.org.uk)

The British landscape has been altered greatly over time and continues to be subject to a range of pressures and impacts. Within this landscape wetlands continue to be lost and degraded. Noble attempts have been by statutory Government agencies and non-governmental organizations to arrest this decline through wetland restoration and habitat creation initiatives. Good examples can be found within the UK such as at Wicken Fen, Abbots Hall Farm and Potteric Carr. The authors contend, however, that even the most extensive endeavours have been limited in scale when compared to European examples. Furthermore sites are traditionally enhanced in isolation and not within a wider landscape context or framework. There is a lack of central strategy and implementation mechanisms for stakeholders to work together to achieve sustainable wetland habitats and species. Most large new wetland initiatives are lead by individual NGOs and arise from opportunistic funding windfalls. Even where partnerships have come together, large scale wetland restoration or creation initiatives in the UK encounter routinely a variety of barriers and problems. These can vary from poor understanding of the socio-economic costs and benefits, obstructive or inflexible legislation, misinformed or poorly understood public perception and conflicts with existing conservation or heritage interests. Without addressing the issues raised by these barriers and establishing an integrated strategy for delivery, any vision for landscape wetland restoration will remain an academic exercise and not a conservation reality. The authors present these barriers and pose key questions to be addressed by the conference.

## Theme 2: Blockages, barriers and opportunities

### Laurence Tricker

Project Manager Natural Environment, Environment and Economy, Kent County Council,  
Invicta House, Maidstone, Kent, ME14 1XX  
Tel No: 01622 221520 Fax No: 01622 221636 Mobile: 07766 250042  
Work Email: | [laurence.tricker@kent.gov.uk](mailto:laurence.tricker@kent.gov.uk)  
[www.kent.gov.uk/environment](http://www.kent.gov.uk/environment)

Ideas for debate!

This presentation looks at how Kent County Council has developed a series of maps that help inform our planning process and can help guide land managers as to the best options for biodiversity. However these 'best' opportunities may or may not be everyone's opportunity and in fact can be seen as additional constraints.

Our colleagues involved in the Local Development Framework are struggling with the concept of large scale areas being identified not for their current value (designations etc) but what is the lands future value in creating landscape connectivity, permeable landscapes or perhaps if we get very ambitious re-wilding on the scale that the Dutch have created in their extensive reserves.

We have also been somewhat traditional in our approach presenting opportunities for habitats that are very much dependant on traditional farming with biodiversity as a by product, which perhaps given that this is SE England is our current best tactic. However this leads to another problem in this part of the UK with a high level of uncertainty in the viability of economic grazing.

Many Opportunity/Visioning mapping projects have been developed and EN's recent report on this identified some 30+ separate approaches/methods. The report (name/ number?) highlights the many problems and makes recommendations that Natural England will have to grapple with in the near future.

Significant funds exist in the environmental sector that has been in the past often poorly focused, relying on land managers/farmers taking up these schemes if the books balance.

What is required is a national land use policy that focuses resources on growing food without damaging the environment whilst setting aside/creating large enough areas for our degraded biodiversity to not just survive but to thrive into the future.

### The Vision

To produce a map based model that **guides** strategic organisations and policy development and **influences** local decision-makers. The **Background** to the Opportunity maps produced for Kent was based on trying to answer some key questions within our spatial planning role that influence future landscape and biodiversity issues. That would reflect on the lands capability, its landscape, its historical value, its biodiversity value within existing habitats, suggest ways in which we can provide a social value to the decision making process. The method was to combine three key data sets.

#### Habitat capability

We produced countywide maps on habitat capability and identified a number of key habitats we would like to see more of. These maps were based on geology, manipulated soil data, aspect, slope and hydrology.

These maps were produced without any real constraints and taking no account of current land use other than existing biodiversity

Should we consider all land as up for grabs for habitat creation. The traditional mindset within the planning process that we have always looked at loss of existing habitat as the driver for mitigation.

These included

Woodlands, Neutral grasslands, Acid grassland and heathland on the poorer soils  
Calcareous grasslands and more appropriately for today..... Wetlands

What should be stressed is that these maps offer one solution rather than suggesting one or another habitat being of more importance.

### **Existing habitat**

The third element in developing the opportunity maps used was the habitat survey of 2003 that identifies the existing resources and their relationship to other habitats within the wider landscape. However is this the best long-term approach given that this is not optimum habitat just a by-product of farming?

### *Landscape*

The Landscape Description Unit data is based on a national initiative supported by the Countryside Agency, English Nature and many local authorities. It uses a methodology that takes the character areas down to more detailed level based on geology, natural features, land cover and others

### **Opportunity maps**

How did we then determine the best opportunity... by running the model based on landscape a number of ecology principles such as

1. inter-patch distances
2. edge effects
3. landscape connectivity
4. Current land use
5. Size of potential habitat
6. Time elapsed since loss
7. Closeness to river corridor

You can find more about KLIS at this website: [www.kent.gov.uk/klis](http://www.kent.gov.uk/klis)

## **Theme 3: Landscape, water management and climate change**

### **Mike Acreman**

Head of Hydro-ecology and Wetlands at the Centre for Ecology and Hydrology  
Visiting Professor at University College London  
Member of the Ramsar Science and Technical Review Panel

Centre for Ecology and Hydrology, Crowmarsh Gifford, Wallingford, Oxfordshire, OX10 8BB  
Tel No: 01491 692443 (direct) Tel No: 01491 838800 (s/board) Fax No: 01491 692424  
E-mail: [man@ceh.ac.uk](mailto:man@ceh.ac.uk)

The presentation focuses on two major issues in visions for landscape scale wetlands: landscape location and water availability. Landscape location has a significant influence over wetland type with upland peat bogs in the headwaters, oxbow lakes and fens in river valleys and salt marshes in coastal zones. Many landscape locations are associated with particular water supply mechanisms, such as groundwater seepage, spring flow, river inundation and tidal flooding. These processes limit the extent to which we can transpose wetlands from one location to another. Wetlands are naturally transient elements of the landscape. In totally natural catchments, wetlands would continually disappear in some locations whilst appearing in other locations. Because our catchments also contain houses, roads, factories, forests and agricultural land, we cannot maintain our wetlands through natural processes, we need to manage them in the context of other land uses. Water availability is perhaps the single most important controlling mechanism in wetlands. The Great Fen restoration project in eastern England provides a good example. Land use is dominated by arable agriculture with remnant wetland areas. A hydrological study by CEH has shown that water availability is insufficient in most summers to support wetlands. A potential solution is to store excess winter water within the wetland for use in the summer. Climate change predictions are for hotter drier summers and wetter winters in the future, thus increased storage will be needed to sustain the wetland in the long term.

## **Theme 4: Reality Checks with stakeholders**

### **A Farming Perspective**

#### **Dr Andrew Clark**

Head of Policy Services, National Farmers Union, Agriculture House, Stoneleigh Park, Stoneleigh, Warwickshire, CV8 2LZ

Tel No: 0247 685 8510 Email: [Andrew.clark@nfu.org.uk](mailto:Andrew.clark@nfu.org.uk)

The creation of new wetland habitats, especially on a landscape scale presents both threats and challenges to the farming community. Threats from a compulsory change to current land use from rising water levels and opportunities from a new public service (waterscapes) that individuals or neighbours can provide for society. Ultimately the cost of change, not sentiment will be crucial determinants for the farming community.

### **An Archaeological Perspective - Wetland habitat creation/restoration and the historic environment - conserving and promoting archaeological and palaeoecological remains**

#### **Dr David Earle Robinson**

Senior Palaeoecologist, Archaeological Sciences, English Heritage, Fort Cumberland, Eastney, Portsmouth, PO4 9LD

Tel No: 02392 856 776 Fax No: 02392 856 701

Email: [DavidEarle.Robinson@english-heritage.org.uk](mailto:DavidEarle.Robinson@english-heritage.org.uk)

Key website: [www.english-heritage.org.uk/server/show/conWebDoc.3208](http://www.english-heritage.org.uk/server/show/conWebDoc.3208)

In addition to their great significance for nature conservation, recreation and other current activities, wetlands are vital to our understanding of the past. The excellent preservation of organic materials at archaeological sites preserved in or under wetland deposits provides significantly more evidence of past societies and landscapes than corresponding dry-land remains. Wetlands also contain unique and valuable information about past technology and architecture and also past climate, environments, landscapes and, not least, biodiversity.

Modern nature conservation activities aimed at restoring wetland habitats also tend to favour preservation of most, but not all, archaeological or environmental remains present. The raising of water levels results in rewetting of organic deposits, usually slowing markedly the rate of their decay. Unfortunately, the same process can have a deleterious effect on these same deposits if the water is rich in oxygen or nutrients; it is particularly damaging for inorganic remains such as metal objects.

The major threat from wetland habitat restoration or creation comes when physical disturbance of the deposits is required, such as in the de-silting of ponds and lakes and a range of activities aimed at controlling the hydrology. Wetland deposits, and the archaeology preserved within them, are extremely fragile and once destroyed or disturbed it cannot be recreated.

Restoration projects should take full account of these aspects to avoid the loss of irreplaceable evidence for past human activities, lifestyles and landscapes. It is also important to ensure, for sites open to the public, that historic environment aspects are promoted and explained alongside aspects of the natural environment in any publicity, guidebooks, interpretation panels etc.



## The Value of Wetlands

### R. Earll

CMS – Coastal Management for Sustainability, Candle Cottage, Kempley, Glos, GL18 2BU  
01531 890415 [bob.earll@coastms.co.uk](mailto:bob.earll@coastms.co.uk)

#### Introduction

A theme that emerges consistently from the World Wetlands Day conferences *is the value of wetlands*. Several issues arise relating to this including:

- the difficulty in convincing *others* of their value
- the widespread recognition of the multiple benefits/values of wetlands *within* the wetland community
- a wide range of *non-biodiversity related functions and values*
- the close link between wetlands and *water* in the widest sense is also evident.

The WWD 2005 conference brought together a wide cross section of wetland expertise and in order to generate useful deliverables the a question on the Value of Wetlands was posed to the audience. Delegates were asked to state their choice of the non-biodiversity value of wetlands and rank these 1,2,3 etc.

The objectives of this were to:

1. Describe the non-biodiversity values that delegates highlighted
2. Quantify this view
3. Highlight the need for wetland strategies to include non-biodiversity values
4. Collect reference material for the CD that would help advocacy on this issue

The analysis of the 584 responses from 126 delegates is given below.

Thanks to everyone who took part. We are keen for people to use this data - please let us know if you want us to send you any of the data files: [bob.earll@coastms.co.uk](mailto:bob.earll@coastms.co.uk)

**Table 1.** World Wetland Day conference 2005: Delegate views on the biodiversity and non-biodiversity value of wetlands

	Number of Mentions	Priority Scores
Biodiversity	101	205
Flood Management	97	147
Recreation & Tourism	94	52
Landscape, Aesthetics & quality of life	63	40
Water Quality	56	56
Catchment & Ecosystem Processes	38	56
Economic & Links	31	25
Education & Public Awareness	30	26
Water Resources	20	20
Farming & Agriculture Activities	19	7
Heritage & Cultural	19	9
Social & Community Benefits	9	10
Fisheries	6	2

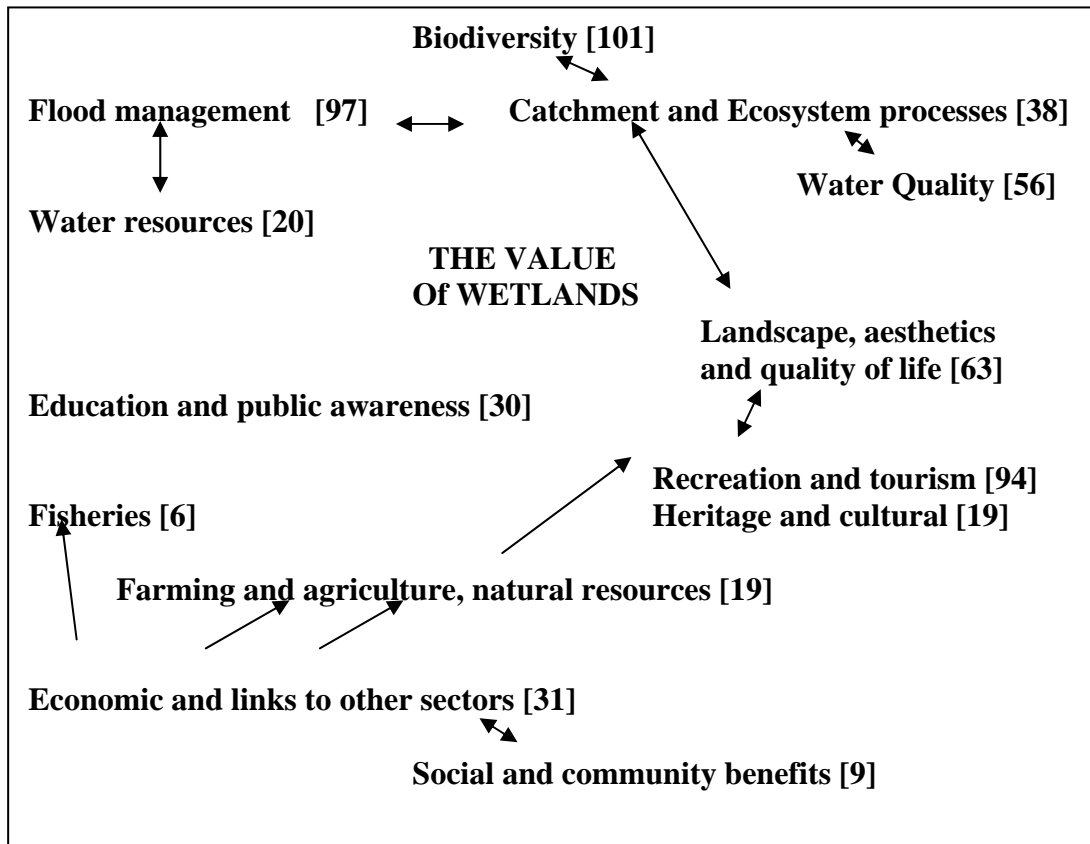
#### Table 1 Explanation

Non-biodiversity values of wetlands – the number of times they were itemised by delegates

Priority scores – the number of points gained *including biodiversity* in a 1<sup>st</sup> = 3 points

2<sup>nd</sup> = 2 points, 3<sup>rd</sup> = 1 point score.

Figure 1. A diagram showing those values highlighted by delegates and the main links between them highlighted by the responses. Figures in boxes are the number of times the values were identified



## Conclusions

**Delegate views** These views represent a cross section of 126 self selecting delegates to the World Wetland Day conference in 2005.

**Biodiversity emphasis** The breakdown of the 584 responses does illustrate the strong biodiversity emphasis of the conference delegates.

**Multiple benefits - non-biodiversity values** The results illustrate that delegates recognise the multiple benefits of wetlands and a wide range of non-biodiversity values. Many of these are closely inter-related and delegates recognised this. Those non-biodiversity functions recognised as most important were flood management, catchment processes – water quality, recreation and tourism and landscape, aesthetics and quality of life. These topics would need to be assessed in any systematic valuation of wetlands.

**Wetland strategy** Any coherent wetland strategy would have to recognise the wide range of non-biodiversity values and the wide range of organisations involved with them. Clearly many of the values have inter-related functional relationships.

**The data files:** The data files are available for further analysis by contacting CMS: they are on the CMS and CIWEM websites.

**Theme 1: Habitat creation and restoration:** - what to create and restore, where, and how?

- How important is it to set targets for wetland biodiversity restoration and creation?
- How should targets be determined and priorities set for habitats, for species and for natural processes?
- Where are the major gaps in understanding for large and small scale wetland habitat creation?
- What would a sustainable, naturally-functioning wetland look like?

## **Theme 2: Opportunities, blockages and barriers:** - integrating wetland creation into the planning process

- How should we engage with the planning process at local, regional and national level for:
  - i. Strategic and local development planning?
  - ii. Agricultural land use planning?
  - iii. River basin, water resource and flood management planning?
  - iv. Biodiversity Action Planning?
  
- What do planners in these areas need to know and how would they like to receive this information?
  
- What are the funding opportunities for wetland creation?
  
- How can we best identify schemes with significant socio-economic benefits?

**Theme 3: Big issues:** - how should we plan for wetland creation and enhancement in the face of major changes in climate and land use?

- What are the practical adaptation responses to climate change that we need to consider?
- How can we take into account major changes in agricultural land use in response to changes under CAP and climate change?
- How should we address the competing demands for water resources in developing programmes for wetland creation and protection?
- How should we take into account the role that wetlands might play in mitigating climate change?
- How prescriptive should we be in the face of uncertainties about future water scenarios?

**Theme 4: Reality checks with stakeholders:** - what are the concerns and aspirations, and how can they be taken into account?

- Who are the important stakeholders in seeking to achieve large-scale wetland improvements?
- What sort of stakeholder engagement process is needed to maximise opportunities and minimise conflict for all?
- What are the opportunities for collaborating with stakeholders in determining multi-functional wetland creation?

## World Wetlands Day Conference 2006

### ***Meeting Evaluation***

1. Name: \_\_\_\_\_ Phone No: \_\_\_\_\_

2. How valuable did you find the meeting? (circle)

Not valuable

Very valuable

1

2

3

4

5

Comment: \_\_\_\_\_

3. What would you do to improve the event?

\*

\_\_\_\_\_

\*

\_\_\_\_\_

\*

\_\_\_\_\_

## World Wetlands Day Conference 2006

# Who's Who in Wetlands Groups, Committees & Organisations

One of the products of the 2004/5 WWD events was an Excel file listing a wide range of organisations in the UK who are very involved in the wetland agenda. This was distributed for the first time during 2004 on the WWD CD. It provided a range of contact details including weblinks to organisations working in this field.

If you would like to be included or have any important changes to make on the 2006 version of the Who's who file please fill in the following form:

**Organisation, Committee, Group name:**

---

**Website:**

---

**Contact name:**

---

**Email:**

---

**Phone No:**

---

**Organisation - Main purpose – products – activities - Key words**

- ---
- ---

Please return to CMS, Candle Cottage, Kempley, Glos GL18 2BU

[Bob.earll@coastms.co.uk](mailto:Bob.earll@coastms.co.uk) or fax to 01531 890415