



Hampshire's Chalk Stream Headwaters Forum
Wednesday 13th June 2007

FORUM PROCEEDINGS

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Introduction

Gail Taylor, Chair of the Vitacress Conservation Trust (VCT)

The purpose of the conference is to bring together the organisations and individuals involved in chalk streams in Hampshire, and for the Vitacress Conservation Trust to hear views and input on important topics.

Delegates have been provided with the opportunity to write down ideas or concerns that arise during the conference. Notes can be placed on a discussion board in the main conference room. The afternoon of the conference will involve delegates being split into break out groups to discuss issues, and the outcomes of these groups will be fed back and presented in the form of a summary by Tim Nevard.

Chairman's Opening Address

Lord Selborne, Patron of Vitacress Conservation Trust

One of the Vitacress Conservation Trust's main objectives is to *'undertake research and analysis into wildlife associated with chalk streams and other habitats associated with watercress and other salad crops and to disseminate the useful results for the public benefit with a view to increasing public knowledge and awareness thereof'*. The Trust has recently provided funding for an educational project with Hampshire and Isle of Wight Wildlife Trust, and is also sponsoring a PhD student at Southampton University, studying the impacts of watercress farming.

Chalk streams are unique. In Hampshire we have many chalk rivers, which include the River Test (SSSI), and the River Itchen (SSSI/SAC), but today we will be concentrating on the lesser known 'Cinderella' chalk streams. We have a mix of people here today; fishermen, watercress farmers and conservationists, and the purpose of this conference is to bring together the views of different groups.

I would like to introduce our panellists who will be commenting on the issues and themes as they arise throughout the day.

Panellists: Peter Kelly, Environment Agency
Kevin Exley, Environment Agency
Michelle Leek, Natural England
Alison Graham-Smith, Natural England

Presentations 1 to 3:

- **“Nature Conservation”** by Chris Rostron, Director for Water for Wildlife, The Wildlife Trusts.

A focus on the work of The Wildlife Trusts, and the partnerships that they have formed with the statutory bodies, water companies and industry, highlighting the conservation benefits that have already arisen, and the huge opportunities to be gained when working positively with companies, as opposed to against them.

- **“Scientific Research”** by Dr Peter Shaw, University of Southampton Centre for Environmental Sciences

A scientific look at the ecology of chalk streams and what categorises them, along with the effects of agriculture and watercress farming on macro invertebrates and plants within the chalk streams.

- **“Fishery Management”** by Paul Knight, Director of the Salmon and Trout Association

Presented a broad spectrum of issues facing the fishing industry. Highlighting the importance of increasing pressures, changing legislation, education and partnership working associated with water course management.

Response from panellists:

Peter Kelly, Environment Agency:

It is excellent to see so much wonderful work taking place.

Alison Graham-Smith, Natural England:

We can see that we are no longer looking at areas in isolation, and are instead moving forward with more landscape and catchment scale initiatives such as catchment sensitive farming delivered through the Environment Agency and Natural England, and the Wetland Habitat Steering group which brings together RSPB, Environment Agency and The Wildlife Trusts to restore wetlands and involve the land around the streams, along with establishing and maintaining a connection with local people in both urban and rural areas.

Question from Lord Selborne, Patron VCT:

Paul Knight referred to the need to achieve good ecological status of our chalk streams by 2015. How can we achieve this status before you know what is meant by it? When and how will ‘ecological status’ be determined?

Response from Kevin Exley, Environment Agency:

There are currently numerous methods being developed in order to assess ecological status, concerned with all different aspects of the streams. Organisms such as invertebrates, diatoms, algae or plants can all be used as indicators of quality. Invertebrates have been used as indicators for over 15 years, so these are not new methods, but we are now looking at the data in more details than perhaps we had in the past. By looking at the methods now, and collecting data, we will have enough data in 2 to 3 years time to make comparisons and assess the ecological status.

Presentations 4 to 6:

- **“Watercress Industry”** by Charles Barter, Director of NFU Watercress Association

An insight into the work of the NFU Watercress Association, and its role in regulating and protecting the watercress industry, along with promoting research into the environmental effects of watercress farming.

- **“A Retail Perspective”** by Tina Jeary, Head of Fresh Foods Product Development and Technology, Sainsbury's Supermarkets

An introduction to the complex issues that supermarkets face when considering the needs of the consumer, and what can influence where they choose to shop. The presentation also looked at other factors that need to be considered when selecting suppliers, such as the carbon footprint of the food production methods, and transportation of goods to the supermarkets.

Question: *You assumed in your presentation that consumers want all fruit and vegetables available to them all year round, is there a plan to market fruit and vegetables when they are in season to reduce the level of imported goods?*

Response from Tina Jeary: This is a particular dilemma at the moment as supermarkets have created a problem for themselves by providing fruit and vegetables all year around. Now we face the problem that we can't go backwards and stop selling out of season goods, and so we are looking to address the problem by researching alternative ways of providing fruit and vegetables that are out of season. Freezing is one of these options, and we would need to be able to prove the benefits of freezing versus importing to our customer.

- **“Water Supply”** by Meyrick Gough, Southern Water

A focus on Southern Water's water supply zones and abstraction sites within Hampshire, and the current trends in water demand and usage throughout the county. The issues associated with climate change and the potential future sources of water for Hampshire were also covered.

Question: *The Isle of Wight has recently undergone a pilot study where meters were fitted in every home. What differences, if any, do the meters make to water usage?*

Response from Meyrick Gough, Southern Water: On the Isle of Wight specifically, the meter trial resulted in a 6 to 10% decrease in demand. However, the average trends of high water demand in the summer, and a lower demand in the winter were still apparent.

Question: *Your presentation stated that over the past 18 years the demand for water has been decreasing - does this mean that the demands of an individual household are decreasing?*

Response from Meyrick Gough, Southern Water: The water consumption per capita has been stabilising since 1995, although unbiased, ongoing monitoring has been made difficult by factors such as hosepipe bans. However, there has been a downward trend despite these enforced restrictions on water usage. There has also been a decline in the demand for water from industry, which has contributed to the reduction in demand.

Question: *You mentioned the need for Southern Water to hold abstraction licenses – how much do these cost, and who benefits from the money?*

Response from Meyrick Gough, Southern Water: The cost of our abstraction licenses is £4.5 million a year, and the money is payable to the Environment Agency.

Question: *If the water demands of new housing developments cannot be met, why don't the water companies object to the proposed plans?*

Response from Meyrick Gough, Southern Water: Our legal position as a water company is to provide a supply of water, and so all we can do is inform the developers of the cost of the water supply.

Question: *In order to ensure that water companies are taking a holistic approach when abstracting and supplying water, there needs to be a central governing body, who oversee the process – who would you suggest could take on this role?*

Response from Meyrick Gough: The Environment Agency's Catchment Abstraction Management Strategy (CAMS) forum has a large role to play.

Response from Lord Selborne, Patron VCT: The current approach is not joined up. Water companies have an obligation to supply water, but were not consulted early enough in development plans, and therefore have not been able to produce long term plans.

Response from Peter Kelly, Environment Agency: There is a need to deal with competing demands. When the Environment Agency noticed the invertebrate imbalance due to discharges of watercress farms, it was initially thought to be a simple problem that could be easily rectified, but in fact it is an extremely complex problem, with competing interests from industry, the public and conservation bodies. The Environment Agency and Natural England need to work in partnership with all parties concerned in order to successfully deliver initiatives such as Catchment Sensitive Farming, the Water Framework Directive and the Habitats Directive.

Response from Meyrick Gough, Southern Water: £3.6 million was spent on the River Itchen, where there was a good baseline data. With the catchments that are being discussed today, it needs to be ensured that there is ample baseline data in order to move forward and make quality management decisions.

Questions from the floor

Question for Meyrick Gough:

Your presentation stated that 31% of household water is used to flush the toilet. This doesn't need to be pure water so can we use grey water to flush the toilet, and on the garden in order to make a huge saving on our water consumption?

Response from Meyrick Gough, Southern Water:

The issue of grey water recycling is difficult to tackle. For example, B&Q sell rainwater harvesting for £1500, which you can install for £500 and will store 1000 litres water. However, 1000 litres from a water company costs 79p. This may be an extreme example, but it is relevant to consumers. New builds should be taking the issue of water recycling into consideration in their development plans. In America, the water network has been duplicated to provide 'clean' water and recycled effluent for toilets etc. in separate pipes. In the UK this would mean laying 14,000 kilometres of new mains pipes, so it is not easy to achieve.

Question for Paul Knight by Allan Frake, Environment Agency:

Regarding the example you gave of the River Bourne, and how there are 'tick boxes' for positive management. I'm unsure as to whether you can look at one site generically and then roll out the lesson learned nationally as there are very complex issues involved, and the same management plan will necessarily equate to every site.

Response from Paul Knight, Salmon and Trout Association:

Yes I agree, but by using previous experience from other sites, we can provide advice. We are dealing with very tight resources, so whilst I agree that we cannot replicate one system in every situation as the methods will not fit into all situations, it is still an inexpensive way of providing advice. However, if we can research more into the ecological issues such as PEITC and make that information available, then we can take steps forward to a more informed management style. My main point is that giving the right advice to the right audiences would at least help.

Comment:

Advice cannot be given unless we have the science. The River Bourne is a good study when discussing abstraction issues etc, but we need to be concentrating on the headwaters of chalk streams, which historically have watercress beds which change intensive use of water at different times of the year. The issue of aquifer storage, by trying to recharge the aquifer in winter is affected by the watercress farming as water is taken out of the aquifer in the winter to protect the crop from frost, so the aquifer will not have a chance to recharge in time for summer. A full hydrological survey is required in order to establish the impacts and move forward with appropriate management responses.

Question:

In Wiltshire there is a main chalk aquifer from which a lot of water is abstracted and exported. It appears to me that Southern Water is lucky, as it has major sources of potential abstraction at the mouths of the river, which Wiltshire does not. Wales has 14 times the amount of available water than in the South East of England, and so Wales seems to be the most obvious answer to our water resource issues. This needs to be taken to the government as an option.

Response by Lord Selborne, Patron of VCT:

There is a lot of local pressure in Wales to stop exporting water.

Comment:

We should all think harder in order to plan for climate change, which is already devastating headwaters via temp change, river flow, all of which contribute to the 'headwater malaise'. We need to think now about how we can supply large quantities of water, whatever the capital cost in order to ensure a sustainable future for water.

Question by James Carr, Salmon and Trout Association & Eden Rivers Trust:

I am relieved to hear Wales & Kielder as suggestions for abstraction sites, and not the Lake District which is already over abstracted. My question is about understanding rivers, including research into the groundwater sources, chemical structure and temperature of the water, how the water reacts within the habitat and the ecological effects it has. Are these issues really understood on chalk streams, where large quantities are being abstracted and the ecology is being altered? Can the Water Framework Directive actually be delivered if the ecology of these streams is being changed?

Response from Meyrick Gough, Southern Water:

Understanding the ecological processes on the River Itchen is the key to successful management, and these are now well understood. Research into the River Test has begun, but needs to go further.

Response from Kevin Exley, Environment Agency:

The Environment Agency has looked at a target flow regime for invertebrates on the River Itchen, and a lot of information was gained and understood; but further work is still required as there are still management issues. Good relationships are necessary in order to manage abstraction on the River Itchen, and with these, we should hopefully see results in reduced abstraction. We need to work in partnership in order to gain knowledge and continue to get the information required as there is still a lot more to learn.

Question from Alan Marsden, Chairman of St Mary Bourne Parish Council:

My question relates to Meyrick Gough's comments on the reuse of effluent. The disposal of water is a massive operation, but are equal resources given to sewage treatment and disposal?

Response from Meyrick Gough, Southern Water:

Since the water industry was privatised, a quarter of the new investment has gone into waste water and sewage. My background is in clean water and water supply, but I do know that we are aware of issues, and that the sewers on the Bourne can become saturated at times of high groundwater levels, so a tank is required for when the groundwater gets too high. Waste water discharge has historically had the lion's share of any resource within the water industry.

Comment:

As in the River Bourne situation, groundwater levels do fluctuate due to natural conditions and the effects of abstraction. However, the concern is that when the groundwater falls below the level of the sewer, sewage may leak in the groundwater and contaminate water quality. We need to be thinking of how water can be extracted in one area of the catchment, and replaced higher up in the catchment in order to recharge the groundwater and headwaters of this stream.

Response from Lord Selborne, Patron of VCT:

Pumping water upstream after treatment is an option for recharging the headwaters. This can be difficult though. An example is at Margate, where the Environment Agency did not grant approval for water to be pumped up to headwater and released.

Response from Meyrick Gough, Southern Water:

In Hampshire we have looked at groundwater recharge schemes undertaken elsewhere in the country, but current thoughts are that it may be impractical in Hampshire and may not be permitted.

Comment:

The permission issue is due to a general lack of knowledge. In order to be successful, the right parts of the headwaters need to be chosen in order to optimise the potential of any rainfall or water release, and to ensure that the aquifers and groundwater are recharged.

Afternoon session briefing

Tim Nevard, Conservation Foundation & VCT Trustee

For the afternoon session, delegates were asked to breakout into six discussion groups, each facilitated by a rapporteur. The aim of the groups was to discuss the issues highlighted by the morning's presentations, and suggest potential solutions that may overcome the problems faced. Several discussion topics were suggested, including: How can we effectively recharge the headwaters? How do we reconnect the floodplain and the stream? How do we increase biodiversity of floodplains?

Conclusions from Breakout Groups

Tim Nevard, Conservation Foundation & VCT Trustee

The afternoon's workshops have resulted in several common themes. It is apparent that there are numerous groups and forums already working towards similar goals. It is important to keep in mind that the Chalk Stream Headwaters Forum does not seek to duplicate past projects; we need to add to the existing body of knowledge, not simply reinforce what is already in train. What we need is new, practical initiatives that can add to the total effort.

Common themes and recommendations from the workshops;

- The Chalk Stream Headwaters Forum has a key role in the identification of the practical science of chalk headwaters. It was suggested that the Forum should meet annually to focus specifically on applied science and research, ensuring that there is a strong research institution contribution.
- A common vision for the future of chalk streams needs to be worked out. This vision should draw on past management prescriptions, but should also be forward-looking and cognisant of the changing world in which we live.
- The issues surrounding water abstraction and aquifer recharge are inextricably linked. The recharging of aquifers requires a catchment-wide management approach, with issues such as porosity, soil erosion prevention and runoff management being prominent.
- The current bureaucracy is frustrating, and the permissions process is often complicated for landowners. This can sometimes act as a deterrent to good local initiatives, and the way these are regulated and managed may need to be looked at.
- A broad range of participants is required, with not just the bureaucracy, but also local groups and organisations, including landowners, businesses, statutory bodies and the wider community.
- How could new initiatives be funded? There were several suggested options, such as levying water bills, or through the fishing or abstraction licenses.
- The reinstatement of flood plains is an important issue to consider, but how exactly can a 'wetter landscape' be replaced outside of the stream? It may be possible in some areas but would not be suitable for others so would need to be considered on a location by location basis.

Comments from the floor:

The main points of discussion in the afternoon centred on:

1. The focus and content for future Forums.
2. Which geographical areas should be considered by the Forum.
3. The importance of orienting scientific research towards practical management.

Paul Knight, Salmon and Trout Association:

We need to clarify which ecological standards we need for future management of 'chalk streams'. What flow do we require to sustain ecology of chalk streams? What is meant by good ecological status? To answer these questions, we need to look at the entire catchment and the groups involved such as agriculture, land management, fisheries, etc. All water bodies originating from the River Test need to be encapsulated by the catchment management group to ensure that there is connectivity. It is important to have a mix of science and local people in order to keep these connections.

Tim Nevard, VCT:

The River Test is small but encompasses a large area – is the area too large to capture the interest of local people?

Paul Knight, Salmon and Trout Association:

No, the (River) Tweed forum has worked extremely well and has encouraged agriculture to open up huge areas of small holdings which included areas of water not seen before. In order for this to work, it needs to be properly co-ordinated.

Tim Nevard, VCT:

How do you engage people on a local level, and encourage them to manage the land around them?

Ian Rees, Lincolnshire Chalk Streams Project:

The Lincolnshire chalk streams project is concerned with a relatively small area, and the role of the project is to get the message across about awareness on a local level. Increasing the amount of focussed research being conducted is an excellent way for the research from academia to filter its way down and feed into local projects on the ground.

Tim Nevard, VCT:

How much are people motivated by hearing about the research that is being done? Is this a potential benefit of the Forum?

Steve Rothwell, Vitacress Trustee:

I am highly supportive of the scientific research that is being conducted, and although I didn't hear anything new today it was excellent to hear it explained well to a broader group.

Pete Shaw, University of Southampton:

There is a long interest in chalk streams, and there may be some overlap with the work of the River Restoration Group, who are highly influential and have annual meetings. It would be good to have a Forum which is concerned with applied research for chalk streams.

Tim Nevard, VCT:

If we are not to duplicate, how can we focus the aims of the Forum?

Gail Taylor, VCT Chair:

We should not be interested in research for the sake of research, however there is a clear need to translate research into a format that is practical and useable on the ground, and feed this back to the Forum. I think the Forum needs to focus on making the findings from research usable in a practical sense.

Simon Cain, Cain Bio Engineering Ltd:

The key point seems to be the amount of information and research effort going into chalk stream ecology, but a relatively small amount of outcome in a practical level on the ground. Both sides need to work together in order to have a holistic approach towards research requirements and management. At Cain Bio Engineering, we are experimenting with new technology, but that isn't being shared with other groups and organisations. The Forum need to ensure that it is a two way process, and that groups are feeding back to the Forum about their experiences.

Tim Nevard, VCT:

How valuable would it be to involve riparian landholders?

Paul Knight:

The dissemination of information is vital. Regional, national and local plans are useless without the knowledge and ability to apply the research on a practical local level.

Comment:

More applied science needs to be undertaken, as conducting work on a trial and error basis is no substitute for solid research.

Key points from the day:

Tim Nevard, Conservation Foundation & VCT Trustee

Having listened to the debate in our plenary session and in the workshops, it seems as though two clear areas of consensus have emerged:

- The urgent need to bring together applied science and research with practical conservation work in chalk stream management and its dissemination at the local level.
- The need for broadly-based 'Catchment Management Groups' for rivers such as the Test has been identified. The essential role of locally-empowered 'Sub-catchment Management Groups' for important tributaries such as the Bourne was also strongly supported.

This consensus and practical outcome is particularly gratifying to the VCT Trustees and gives us a strong case to encourage our sponsors to support this Forum as a regular event!

Chairman's Summary and Conclusions

Lord Selborne, Patron of Vitacress Conservation Trust

Today's Forum has brought together people from different areas that are involved with chalk streams in many different ways. We all recognise that there is only going to be progress based on good science with the sharing of good practice. Any opportunity such as this, where like minded people can discuss catchments is a positive step forward.

The outcomes of today have highlighted that funding is a major factor that needs to be considered when moving forward, particularly with organisations such as the Environment Agency and DEFRA having limited funds to offer. Therefore, direct funding from the consumer and other river users should be considered. OFWAT have agreed that 5% of the total water charges should be fed back into research, and whilst some of this money will be spent on water treatment projects, there may also be scope to fund environmental research into impacts on chalk streams that has been discussed.

Although grants are often sought to fund research projects, I feel that funding from the consumers is the most logical option. Tina Jeary's presentation highlighted that consumers don't always recognise the impact of always demanding a 'bargain', and that there are consequences to lower prices. If the money from water charges was used to fund future research projects, the consumer may become more aware of the impacts, and we can then work towards ensuring that the water supply processes become more sustainable.

Finally, I would like to thank Tim for summarising the workshop outcomes, and to all that have participated – the speakers, panellists and chairs for the breakout sessions. Thank you to Carrie Hutchings from Vitacress for organising the conference, and for all of the hard work that has been put into making the event a success.

Delegates

First name	Surname	Company / Organisation
Liz	Allinson	Hants and IOW Wildlife Trust
John	Archer	NFU South East
Charles	Barter (Chair)	The Watercress Company
Fiona	Bowles (Chair)	Wessex Water
Geoffrey	Butler	Bossington Farms Ltd
Simon	Cain	Cain Bio Engineering Ltd
Charles	Cardiff	Hurstbourne Priors Parish Council
James	Carr	Salmon & Trout Association
William	Daniel	Famous Fishing
Craig	Dawson	Piscatorial Society
Martin	De Retuerto	Natural England
Melanie	Dixon	University of Southampton
Rue	Ekins	Natural England
Peter	Evans	
Glynne	Evans	British Trust for Ornithology
Kevin	Exley	Environment Agency Southern
Andy	Fish	Hampshire Mills Group
Allan	Frake (Chair)	Environment Agency
Meyrick	Gough	Southern Water
Alison	Graham-Smith	Natural England
Anthony	Gray	Franklyns Fish Farm
Richard	Gueterbock	HEP / 'Quality of Life'
Peter	Hayes	Shrewton Lodge Stud
Jean	Hedley (Chair)	Hants and IOW Wildlife Trust
John	Holland	The Game Conservancy Trust
Tony	Howard	Hampshire Mills Group
Malcolm	Isaac	Vitacress Salads Ltd
Tina	Jeary	Sainsbury's Supermarkets Ltd
Peter	Kelly	Environment Agency Southern
Paul	Knight	Salmon & Trout Association
Robin	Lalonde	Test & Itchen Association
Terry	Lawton	Fly Fishing & Writing
Michelle	Leek	Natural England
Alan	Marsden	St Mary Bourne Parish Council
Keith	Maxey	Clatford Mills
Stewart	McTeare	Piscatorial Society
Rod	Murchie	Environment Agency Southern
Rob	Murdock	Environ
Kate	Ody	Environment Agency
Mike	Payne	NFU Watercress Association
Ian	Rees	Lincolnshire Chalk Streams
Graham	Roberts	VCT Trustee / Hants and IOW Wildlife Trust
Chris	Rostron (Chair)	The Wildlife Trusts
Steve	Rothwell	VCT Trustee / Vitacress Salads Ltd
Mike	Rushwoth	Vitacress Salads Ltd
David	Russell	VSL Non Executive Director
Christopher	Saunders-Davies	Test Valley Trout
David	Sear	University of Southampton
Lord	Selborne	VCT Patron
Peter	Shaw	University of Southampton
Nick	Sotherton	The Game Conservancy Trust
Nick	Stenning	VCT Trustee / Vitacress Salads Ltd
Earl of	Strafford	Piscatorial Society
Debbie	Tann (Chair)	Hants and IOW Wildlife Trust
Gail	Taylor	VCT Trustee / University of Southampton
Amanda	Thomas	University of Southampton
Nigel	Thomas-Childs	Environment Agency
Mark	Wilson	VCT Secretary / Vitacress Salads Ltd
Andrew	Worgan	Centre for Ecology & Hydrology