THE VITACRESS CONSERVATION TRUST

Minutes of The Bourne Sub Catchment Management Group
Thursday, 20 March 2008

Chair:	Gail Taylor (GT)	-	University of Southampton & Vitacress Conservation Trust (VCT) Trustee
Attendees:			
	Alison Graham-Smith (AG-S)	-	Natural England
	Cyril Bennett (CB)	-	Consultant
	Graham Roberts (GR)	-	Hampshire & IOWWT & VCT Trustee
	Henry du val de Beaulieu (HdvdB)	-	Apsley Estate
	Michael Malyon (MM)	-	Wyke Farm
	Peter Evans (PE)	-	Local Interest
	Pete Shaw (PS)	-	University of Southampton
	Rob Murdock (RM)	-	Environ
	Shirley Medgett (SM)	-	Environment Agency
	Simon Cain (SC)	-	Cain Bio-engineering
	Steve Rothwell (SDR)	-	Vitacress Salads Limited & VCT Trustee
	William Daniel (WD)	-	Famous Fishing
Apologies:	Richard Sankey (RS)	-	Angler
	Tim Nevard (TN)	-	VCT Trustee

1. Welcome and Introductions

The Chair welcomed all attendees, who in turn introduced themselves.

2. Review of Minutes of the Meeting held on 7 December 2007

The Minutes of the meeting held on 7 December 2007 were accepted as a true and fair record.

3. Matters Arising

It was agreed that any points arising could be addressed within the agenda.

4. Review of the latest studies relating to the condition of the Bourne Rivulet and any agreed actions

PS outlined key research to date with regard the invertebrate imbalance below the VSL site.
It was generally accepted that watercress extract elicits an avoidance reaction in Gammarus pulex and can be lethal.

PS advised that his PhD student, Melanie Dixon's initial field trials had suggested VSL's recirculation of discharges likely to be tainted by PEITC seemed effective, though the weather last summer had skewed control results. Plan is to repeat this summer with more intensive sampling and higher replication. Laboratory work is ongoing to explore the reaction of G. pulex to watercress extract and to contrast with their reaction to PEITC.

PE advised his research suggested the breakdown products of PEITC could be highly toxic and asked what work was being undertaken to establish that the mitigation by passing discharges through watercress beds was sustainable.

PS advised this aspect would be investigated in the PhD.

RC advised Environ are reviewing the environmental fate of PEITC and will publish the outcome.

HdvdB suggested fish populations and presumably invertebrates below the watercress farm were healthy post war, but had declined since the 1980s. What has changed?

PE pointed to a TV programme where a claim had been made that a trout farm relied upon the constant outflow of Gammarus from Hurd's organic watercress farm to feed the fish.

SDR explained that the site was now more productive than in the past. Traditionally watercress was grown and sold only when there was an "r" in the month. That changed in the 1970s and through the 80s with the advent of seedling production….an ability to clean out and re-plant beds for flower-free summer production. Output was probably 2 or 3 times higher in the summer now than 30 or 40 years ago.

SDR accepted this was intensification but pointed out the alternative was to add food miles. VSL's strategy is to avoid this, but to mitigate any impacts of local production intensification.

PS pointed out that we need a target for the stream. What is "good ecological status" for the Bourne?

HdvdB suggested an ability to support a thriving fish population.

SM advised that if a BMWP was to be used as a measure it should be 140 to 150, but the meeting generally agreed BMWP scoring cannot alone indicate a stream's health.

PS circulated graphs of his analyses of past data so far. They suggested that in the past 2 to 3 years the Eastern Channel had moved to a status close to the Western channel's long term average…in terms of BMWP score and numbers of Gammarids.

General discussion on the merits of sampling methods and expression of results followed.

General consensus was that all have their strengths and weaknesses; none are tailored to chalk headwaters.

PS offered to receive all biological monitoring data and to enter into a database from which we could trend changes.

ACTION: The group agreed to the suggestion that a database of all published reports and research from this sub catchment would be of value and this should be accessible in an electronic form using the internet. Coupled to this, it would be useful to have an electronic forum for discussion within the group. This site would be kept closed from the public for the present. GT agreed to investigate the possibility of the University of Southampton hosting such a site.

PE felt phosphate release from the VSL site was impacting the Bourne and the groundwater. He suggested the bed bases are gravel, overlying gravel in hydraulic continuity with the groundwater.

SDR advised the beds are impermeable…compacted chalk, gravel and organic debris over c.100years. A trickle of water added to the top flows to the bottom at any time of year.

Debate followed re the potential for leaking sewers and septic tanks in the valley to release phosphate to surface gravels at times of low water table, to be picked up as the table rises and upper Bourne flows.

PE asked what plans the EA had to assess plant life in relation to phosphate impact.
SM advised a diatom study is planned.

AG-S felt SW should attend or respond to this concern and to that of the impact the Ibthorpe abstraction has.

PE suggested the VSL abstraction is more damaging by far.

SDR pointed out VSL's use is non consumptive and that the Bourne has always dried above the VSL site, which is historically recorded as the perennial headwater of the Bourne.

PE advised a hydrogeological survey is needed to resolve these issues.
GT felt we should seek expert advice.
PE offered to supply contact details he has.

CB felt water temperature should be measured. Shallow flow through watercress beds will warm the water in summer and cool it in winter.

SC raised the issue of road drain discharges to the Bourne.

It was generally agreed these are a contributing factor to the condition of the Eastern channel in particular, but WD advised he had data from the University of Southampton to suggest past accumulations of pink sand were from the VSL operation.

SC further explained the impact of historic dredging upon the substrate of the Bourne.

GR felt the meeting was failing to focus; that a partnership approach was needed and that we had to accept there was no quick fix. He applauded VSL for being willing to engage with and respond constructively too its critic's concerns.

WD echoed the view and committed to share data and to work with the group to help identify and resolve problems.

HDV similarly thanked VSL for facilitating the group and addressing the issues. He suggested the EA were potentially liable for past issues in their management of the VSL discharge consenting.

SDR responded that VSL was committed to act responsibly, that in the past it had taken healthy fish populations on site and NRA and EA lack of concern as confirmation that its discharges were acceptable.

But since the late 1990s, on becoming aware of the potential for PEITC to affect invertebrates, VSL had decided to research the invertebrate impact issue and to find and implement solutions.
SDR stated his continued view that a wetland, as proposed in 2002, would have fixed the problem, much as the recent changes involving passing outflows through undisturbed watercress beds seemed to be doing.

GT asked for views on a wetland.

WD felt the Eastern channel was too important historically to be materially changed.

The general consensus was that more science was needed to identify the causal factor(s) of any impact and to identify best mitigation.

PS suggested the PhD in hand would go a long way to delivering the answers, but that we did need to define "good ecological status"

ACTION: GT proposed that PS head a working group charged with deriving a definition of 'Good Ecological Status' for the Bourne sub catchment to bring to the next meeting, enabling us as a group to have a fixed vision and targets for what we would like to achieve. It would include consideration of invertebrate, plant and fish communities.

PS accepted the task and asked for contributors. PS to confirm group members in due course**.**

5. **Date of Next Meeting –** Wednesday, 21 May 2008