A clear solution for farmers

CATCHMENT SENSITIVE FARMING

Reducing sheep dip pollution in Northumberland National Park

River Till

Tweed, Aln, Coquet & Coastal Streams (25)
CSFO: Stuart Moss

What was the context and purpose?

In order to improve water quality and meet Water Framework Directive (WFD) targets we must address diffuse pollution from agriculture (DWPA). Catchment Sensitive Farming (CSF) seeks to raise farmers awareness of the nature of and problems caused by diffuse pollution and instigate changes in farming practice to reduce DWPA to reasonable levels. CSF uses a range of instruments including advice and incentives across 50 catchments in England, including the Tweed, Aln, Coquet and Coastal Streams Catchment, where going beyond good farming practice is essential to deliver required environmental outcomes.

Environment Agency monitoring highlighted that pollution from sheep dip was a priority issue in the catchment. The focus of the River Till Sheep Dip Pollution Reduction Project is to minimise the risk of sheep dip pollution in the original area ofTweed, Aln, Coquet and Coastal Streams Catchment, referred to as the River Till Catchment in this case study.

The River Till Sheep Dip Pollution Reduction Project is a partnership project between Northumberland National Park Authority (NNPA), Catchment Sensitive Farming (CSF) and the Environment Agency.

Why did we target sheep dip pollution?

Environment Agency monitoring of the River Till and northern coastal streams which make up

part of the Tweed, Aln, Coquet and Coastal Streams Catchment shows that water quality is generally good. Monitoring showed significant variation throughout 1990-2000 and investigation was undertaken in order to gain understanding of the nature and location of issues.

The high risk of pollution from sheep dips, alongside some evidence of pollution and the high ecological value of the area meant that this catchment was deemed to have a high level of sensitivity to diffuse pollution from agriculture.

A CSF appraisal of current issues in the catchment, undertaken in 2006, identified two target areas for further work, around the Bowmont Water and River Breamish. This area was

extended to include all uplands in the National Park and CSF catchment in sheep farming.

The evidence to support this prioritisation was provided by a Newcastle University MSc study, undertaken in 2005, looking at biological quality and accumulation of sheep dip chemicals by moss. Twenty-five sites were monitored throughout the River Till catchment. One site in the Bowmont Water tested positive for sheep dip chemicals. Several biological samples taken in the River Breamish showed poor quality and the absence of sensitive taxa which indicated that pollution from sheep dip may have occurred.

What were we trying to achieve?

The aim of the project is to minimise the risk of sheep dip pollution in the Tweed, Aln, Coquet and Coastal Streams Catchment whilst allowing farmers to continue to effectively control ecto-parasites in sheep.

The specified objectives of the project were:

- To raise farmers awareness of the nature of and problems caused by sheep dip pollution
- To raise farmers awareness of effective methods for ecto-parasite control
- To minimise the pollution risks posed by sheep dipping facilities and flock management after dipping.

The specified outcomes of the project were:

- Farmers would have an understanding of the nature of and problems caused by sheep dip pollution
- Farmers will have an understanding of effective methods of ecto-parasite control
- Farmers will have an understanding of the pollution risks posed by their sheep dipping facilities and flock management after dipping
- Farmers will have taken action to minimise the pollution risks posed by their sheep dipping facilities and flock management after dipping.

Location and set up of typical sheep dipper in the project area with stream in the foreground and open hill and unfenced watercourses in the background.

How did we target sheep dip pollution?

The River Till Sheep Dip Pollution Reduction Project was a partnership project between NNPA and the Environment Agency. The NNPA co-ordinated the delivery of the project whilst the Environment Agency provided £14000 of funding throughout 2006-07. Advice was delivered by local vets, specialist consultants, NNPA Farms Advisor and the catchments Lead Catchment Sensitive Farming Officer (Lead CSFO). The project targeted 31 farms (21 farmers) which lay within the NNPA boundary and the original River Till catchment. This project area encompassed a wider area than the Bowmont Water and River Breamish target areas identified in the Catchment Appraisal.

The first 3 phases of the project were successfully completed as outlined in the table and the following images show the location and set up of a typical sheep dipper in the project area and a typical recommendation sheet from a sheep dipper improvement plan produced in Phase 3 of the project.

Typical recommendations for improvement included:

- Renewal of Dip Tanks.
- Extra / improved splash protection.
- Concreting of the sheep draining area (post dipping)
- Concreting the Apron / Bunding / Surge protection around dipping area.
- Net fencing to hold the sheep, thus allowing fleece to be fully dry, before sheep pass

What phase?	Cost?	When?	Who?
Phase 1 – Animal Health Plans developed for 31 farms	£7750 (£250 per farm)	Sep 06 – Dec 06	Local Vets
Phase 2 – Workshop delivered to raise farmers awareness of the nature of and problems caused by sheep dip pollution and effective ectoparasite control	£450	Feb 07	Speakers inc: Local Farmer, Local Vet, Veterinary Expert from Edinburgh University & Environment Agency Policy Advisor
Phase 3 – Risk assessment of sheep dipping facilities and flock management after dipping and production of sheep dipper improvement plans	£5250 (£175 per farm)	Oct 06 – Jan 07	Specialist Consultant
Phase 4 – Capital works to improve sheep dipping facilities	£47,000	Sep 07 - present	Farmers

This table shows the different phases, delivery costs, timescales and responsibilities for the River Till Sheep Dip Pollution Reduction Project.

What have been the outputs?

A major success of the project has been farmer engagement. All 31 farms (21 farmers) engaged with the project and received specialist 1:1 advice and reports. 60% of the farmers attended the dissemination seminar to discuss the nature of and problems caused by sheep dip pollution and effective methods of ecto-parasite control.

The animal health plans produced by local vets showed that 35% farms in the project area reported sheep scab in the last 5 years. Veterinary experts highlighted the fact that farmers dipping sheep was vital in order to control sheep scab in the area as other forms of ecto-parasite control are ineffective against scab. It was also highlighted that farmers must take a regionally co-ordinated approach and dip sheep annually within the same three week period. This information has been passed to farmers individually and at the seminar so that they can act upon it.

The sheep dipper risk assessments produced by a specialist consultant showed that of the sheep dipping facilities assessed in the project area 41% posed a high (Red) risk and 41% a moderate (Amber) risk of causing pollution. 88% of sheep dipping facilities assessed required capital works in order to minimise the risk of pollution.

What have been the benefits?

The benefits of the River Till sheep dip pollution reduction project have been five-fold. These are:

- Farmers now have an up to date understanding of the nature of and problems caused by sheep dip pollution
- Farmers now have an up to date understanding of effective methods of ecto-parasite control
- Farmers now have a fuller understanding of the pollution risks posed by their sheep dipping facilities and flock management after dipping
- A number of farmers have taken action to minimise the pollution risks posed by their sheep dipping facilities and flock management after dipping. (This is ongoing)
- All the Red Risk dipper will implement the improvement plans.

What are the next steps?

Funding Secured

Three farmers have been successful in gaining CSF capital grant scheme awards towards improvements to their dipping facilities. There was still a need for further farmers with high risk facilities to take action. Approximately £47 000 was required to complete all the works identified in Phase 3. Farmers will meet 50% of the cost of the works so £23 500 of funding has been contributed by the Environment Agency in order to support farmers complete the improvements needed. Appendix 1 shows a breakdown of the standard unit cost for each of the capital works identified in the sheep dipper improvement plans.

Appendix 2 shows a breakdown of the total costs to illustrating how many farms carried out each of the capital works to improve their sheep dipping facilities.

State Aid

The project has been given State Aid clearance Ref No. XA319/2008. To comply with State Aid the scheme is in accordance with Article 4 of Commission Regulation 1857/2006. The aid intensity of 50% is in accordance with Article 4.2(a) (the scheme is to run in a less favoured area and entitled to the higher aid intensity rate of 50%).

Further Monitoring

A further monitoring survey of the Bowmont Water and River Breamish target areas was undertaken in 2006 and showed no direct evidence of sheep dip pollution at this time. This may be a result of increased awareness and improved management of pollution risk by farmers in the project area. A further monitoring survey is planned.

Lilburn Estates

Lilburn Estates own 11 of the farms which were involved in the sheep dip project. Six of the sheep dipping facilities on their farms posed a high or medium risk of causing pollution. Lilburn Estates have undertaken works to improve these facilities and minimise the risk of pollution occurring from sheep dipping operations. Works consisted of relocating a static and a mobile sheep dipper, replacing a dip tank, reconcreting drainage pens, installing additional splash protection and extending holding pens for sheep post dipping.

Appendix 1

Works required	Cost of Element /£	Standard Unit Cost /£	Standard Unit Cost (Inc VAT) /£
Additional fencing/ holding pens			
Fencing materials: £8/m			
Labour: £10/m			
Replace dip bath		1580	1857
Dip bath: £596	596		
Labour: 24hr @ £17/hr	408		
JCB digger: 24hr @ £24/hr	576		
Concreting pens (30/5.5 m pens)		5602	6582
Fencing materials: 165m @ £8/m	1320		
Fencing labour: 165m @ £10/m	1650		
Concreting materials: £2020	2020		
Concreting labour: 36hrs @ £17/hr	612		
Additional splash protection (30/5.5 m pens)		1500	1763
Marine ply: 100m @ £12.50/m	1250		
Labour: 100m @ £2.5/m	250		
Concreting apron		204	240
Labour: 12hrs @ £17/hr	204		
Concreting for surge protection		204	240
Labour: 12hrs @ £17/hr	204		
Concreting for bund along drainers		204	240
Labour: 12hrs @ £17/hr	204		

Appendix 1

Work Required	Unit Cost (Inc VAT)	No. of Farms	Total Cost
Additional fencing/ holding pens		5	0
Replace dip bath	1857	4	7428
Concreting pens	6582	1	6582
Additional splash protection	1500	18	27000
Concreting apron	240	5	1200
Concreting for surge protection	240	16	3840
Concreting for bund along drainers	240	4	960
		Total	47010

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