

Report on Water of Fail farmer focus group



Final Report

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Executive Summary

Diffuse Pollution Management, April 2012

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Summary

A farmer focus group was held on 22nd February 2012 to share knowledge and understanding of diffuse pollution issues and management opportunities in the Water of Fail catchment, Ayrshire. The aims of this evening workshop were to: (I) update the farming community in the Water of Fail catchment on findings from the recent SEPA one-to-one visits; (II) raise awareness about potential funding opportunities for implementing on-farm measures to reduce diffuse pollution impacts; and (III) share experiences of land and water management from across academic, farmer, catchment stakeholder and regulator perspectives. Four presentations by key stakeholders and catchment researchers (SEPA, Ayrshire Rivers Trust, SAC and University of Stirling) were provided to stimulate discussion and debate on issues relevant to livestock farming. Key discussion points raised by farmers have been captured in the report. A brief questionnaire was also used to evaluate farmer attitudes towards particular on-farm measures (confidence in effectiveness, practicality, suitability for implementation) and sources of funding for their implementation.

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1. INTRODUCTION

A farmer focus group was held on 22nd February 2012 to share knowledge and understanding of diffuse pollution issues and management opportunities in the Water of Fail catchment, Ayrshire. This catchment was selected in association with discussions with SEPA staff, principally Lucy Filby – the Ayrshire Priority Catchment Co-ordinator, and CREW collaborators. The original intention was to focus on the Cessnock catchment and run a focus group with an already well-established group of farmers and landowners but there was feeling of potential stakeholder fatigue following a recent farm-based event with this group in December 2011. The Water of Fail catchment was seen as a promising alternative for engaging with the local farming community. It is a neighbouring catchment of the Cessnock, accommodates the same land use and an awareness-raising event was considered timely following the recent completion of the 1-to-1 meetings between SEPA staff and landowners. Scientists, regulators, farmers and catchment stakeholders all contributed their views concerning environmental management under rural priorities at this small informal gathering. The event mirrored a similar event conducted in the Lunan Water catchment in December 2011. The event was advertised as knowledge exchange event to raise awareness of diffuse pollution issues and learn about local viewpoints and concerns. The presentations given at the event are available via the CREW website (<http://www.crew.ac.uk/projects/diffuse-pollution-management/wateroffail>).

A total of nine farmers attended the event out of the 42 who were invited from across the catchment, representing a 21% turn-out rate. Attendees also included one representative from SEPA, SAC, Ayrshire Rivers Trust, James Hutton Institute and NFUS, two members of staff from the University of Stirling and two MSc students from the University of Stirling. The event was advertised via a postcard mail-shot to all farmers in the catchment area (see figure 1) and the NFUS also sent a SMS text alert to all of the farmers the day before the event to serve as a reminder. The event was an evening gathering (6:30-9pm) held at the Craigie Inn, Kilmarnock.



Figure 1: Postcard distributed to all farmers in the water of Fail catchment

2. SUMMARY OF GROUP DISCUSSIONS

The event comprised a series of mini presentations followed by debate and discussion. The presentations centred on key topics of relevance for the Water of Fail catchment with generic applicability to similar intensive livestock areas. These included: (i) feedback from SEPA on the recent 1-

to-1 meetings with the farming community (led by Lucy Filby, SEPA); (ii) opportunities for stream-bank fencing (led by Stuart Brabbs, Ayrshire Rivers Trust); (iii) nutrient management planning (led by Bill Crooks, SAC); and (iv) faecal indicator risks and opportunities (led by David Oliver, University of Stirling). The dialogue and discussion was captured and is summarised in the key points highlighted below:

1. One farmer queried just how big the problem of diffuse pollution really is compared to other catchment related issues and discussion followed to highlight the challenges of diffuse pollution management for compliance with the Water Framework Directive. The group did acknowledge that other land users also contribute to diffuse pollution including landfill, forestry and open cast mining. The balance of the argument from the farming community centred on whether we wanted farmers to produce food, as it seemed that this was not the case from the continual pressures and constraints they were put under.
2. The farmers who attended were keen to understand the temporal dimension to diffuse pollution and whether impacts were felt greatest in winter versus summer months. Much discussion followed with farmers interested in the role of coastal waters diluting pollution. It was noted that levels of FIO's can rise from 100's to hundreds of thousands during a rainfall event. When the water reached the sea it is affected by tides and thus timing of samples will always be critical.
3. One farmer remarked '*we can only have a positive effect [improve water quality] if it doesn't rain*' and argued that even if they stuck to the rules their best efforts would be hampered if there was heavy rainfall. Farmers then expressed their concern over the weather conditions that have been experienced over the last year and how this may have confounded any problems. Discussions about spatial variability in the riskiness of land and its vulnerability for contributing towards diffuse pollution followed. The idea of critical source areas in the fields was highlighted as a way of managing risk.
4. Another farmer noted that he was told to store his slurry for 6 months. However, once spreading resumed he would apply all the slurry to land within 3 weeks and if there was heavy rainfall all the 'good work' work would be undone. He queried why it would not be possible to spread little and often throughout the year and this opened up further discussions surrounding nutrient requirements for livestock farming.
5. Concerns were raised in the timings of soil amendment practices and how rainfall events affect these in terms of the delivery to the water system. This applied to both silage and fertiliser treatments. It was made clear to the farmers that in relation to silage, treatments had to follow guidelines relating to the application of a waste product rather than a plant nutrient and that applications should only be made at the times when the crop requires additional nourishment.
6. Farmers were unsure how faecal bacteria behaved once they entered the sea in terms of their dispersion. There was also some confusion as to how rainfall effects the movement of these contaminants as some felt that the rainfall would have a diluting effect as in the case of nitrates. It was highlighted that this was not the case and that faecal bacteria behave like particulate contaminants with 'solid-like' rather than 'solute-like' behaviour
7. The discussion following the Ayrshire Rivers Trust presentation on footpath improvements and stream-bank fencing raised some interesting discussion surrounding insurance premiums. One farmer was particularly vocal over the use of stiles on fences after a concern was raised by his insurance company following him installing them on his land. In addition, the fence proposed by the Ayrshire Rivers Trust was questioned in terms of whether the fence/path could lead to an

increase in litter and dog foul along the water course and in turn potentially result in a detrimental impact on the water quality. The response was that when put into context the advantages of the proposed project would outweigh the negative impacts associated with an increased footfall on the area.



'Bill Crooks summarises the economical and environmental advantages of nutrient management planning to farmers of the Water of Fail catchment, at the Cragie Inn'

3. FARMER FEEDBACK

All participating farmers were asked to complete a feedback form as part of the workshop. The first half of the form was an exercise to understand farmer viewpoints surrounding the implementation of particular on-farm measures (attributed to categories of land conversion, livestock management, land management and field and water margins). The list of measures for consideration can be found in an example copy of the questionnaire in the appendix of this report. Farmers were asked to choose one management option per category and then state whether or not they had implemented it in the last 5 years, whether they would include it in a future SRDP Tier 2 application, whether they would implement options if they were directly funded under Land Management Options (LMOs) and what costs and benefits affect their choices in selecting appropriate on-farm measures.

A summary of feedback from individual farmers is presented below (note that not all farmers completed the forms):

Farmer 1

- Had not implemented hedgerows in last 5 years but would do so if funded under LMOs. He believed that this would provide better livestock shelter and equate to lower fence maintenance;
- Had implemented the manure/slurry storage option in last 5 years. He believed it had provided better nutrient use on his farm;
- That said, he had not implemented nutrient management planning on his farm but would do so if directly funded under LMOs. He believed that this would allow for more efficient and targetted nutrient use - a potential cost saving in his opinion;

- Had implemented water margins and enhanced riparian areas on his land. He had no further comment.

Farmer 2

- Had not implemented any of the four available options under the land conversion category (arable reversion to grassland, woodland creation, creation/management of wetlands, hedgerow creation/extension) and would not do so under LMOs or SRDP tier 2 applications. No specific reasoning was given;
- Had implemented manure storage options on his farm and also noted that he believed his farm tracks were not in need of improvement – thus would not pursue support for their improvement;
- Would look at soil and water management plans and nutrient management planning if directly funded (yet in later sections of the questionnaire he claimed that he had low confidence in the effectiveness of nutrient management planning and believed that their implementation was not practical);
- He would implement water margins if funded under LMOs and would include in a future SRDP tier 2 application.

Farmer 3

- Would look at all options if they were directly funded under LMOs for all categories of options listed. However, he was not interested in SRDP tier 2 applications.

Farmer 4

- Did not complete the form properly but said that nutrient management planning was a good idea to save money.

Farmer 5

- Had implemented improvements in farm tracks and river crossings in last 5 years. He would look at all other options if funded under LMOs.

Farmer 6

- Would consider creation of hedgerows under SRDP tier 2 and LMOs because they would provide shade and shelter for livestock;
- Had implemented manure storage already in previous applications because he believed that it provides a better use of nutrients on-farm;
- Would consider nutrient management planning if funded under LMOs;
- Would consider implementing water margins under both Tier 2 SRDP and also LMOs because it could impact on better fencing for cattle and also benefit water supply.

The second section of the questionnaire sought feedback on the content of the workshop and also asked farmers to rank their level of confidence in a number of management options for helping to reduce diffuse pollution from agriculture. In addition, farmers were also asked to state how practical they considered particular management options to be for implementing on their farm (where relevant).

Table 1: Summary of participant feedback on the farmer focus group in the Water of Fail Subcatchment

Question	Strongly agree	Agree	No comment	Disagree	Strongly disagree	Further comments
The four topics covered provided new information that i found useful	3	5	1	1	0	a lot of info had little relevance to the operation of my business
The meeting has provided an opportunity to develop a better understanding of diffuse pollution issues	4	5	0	1	0	
I have a better understanding of what is required of land users	3	5	1	0	1	
The meeting provided an opportunity to hear about experiences from across the farming community	2	5	1	2	0	a practical farmers view would have been good ie i did X and saved £y

Table 1 summarises feedback on the content of the workshop from the nine participating farmers and NFUS representative. Overall the content was well received and provided useful information to attendees. One very useful suggestion was to include a farmer viewpoint at future meetings. Given that this was a short evening event it was not possible to accommodate perspectives from all stakeholder communities and the aim was to inform the farming community about particular issues and opportunities and allow for their comment and subsequent dialogue. The practical farmers viewpoint may possibly be better suited to on-farm meetings whereby demonstrations and tours can take place to inform participants. However, the point is valid and should be kept in mind for future events for a more balanced programme of presentations

Table 2 shows the response from seven of the farmers with regard to their level of confidence in a variety of mitigation / management options for reducing diffuse pollution. Numbers in the columns represent the number of farmers who assigned their confidence to each particular class. Surprisingly, there was low confidence in the role of nutrient management planning delivering clear benefits for reducing diffuse pollution despite the positive response following the SAC presentation on this topic the very same evening. The creation and management of wetlands/ponds was also poorly ranked in terms of farmer confidence and is perhaps an area that needs enhanced coverage at future events in terms of opportunities that may arise through their implementation on-farm. Stream bank fencing, livestock crossing points and increased slurry storage all scored favourably in terms of farmer confidence in these options delivering water quality benefits.

Table 2: Summary data on farmer confidence linked to mitigation options

Indicate level of confidence you have in following management options for helping contribute towards a reduction in diffuse pollution from agricultural sources	high	medium	low
Stream bank fencing	4	3	0
Increased manure/slurry storage	4	3	0
Separation of clean and dirty water	3	4	0
Nutrient management planning	1	2	4
Livestock crossing points	4	3	0
Creation of wetlands/ponds	0	2	5

Finally, the perceived practicality of implementing the same mitigation measures on farms was sought from the participants. The same seven farmers responded and their collective data is summarised in Table 3 below. Again, wetland creation was perceived to be of low practicality and this may be the key factor driving the low confidence associated with this particular option for reducing diffuse pollution impacts. A number of farmers raised the point that there must be help (financially) for them to comply and develop alternative management strategies and if that was provided then of course they would be willing to take part. Several farmers suggested that wet weather hampered their chances of complying with diffuse pollution general binding rules. Presumably this related more to ill-timed slurry applications to land (co-incident with heavy rainfall) rather than the proximity of feeding stations and slurry applications to watercourses.

Table 3: Summary data on farmer perception of practicality of mitigation options

Indicate level of confidence you have in following management options for helping contribute towards a reduction in diffuse pollution from agricultural sources	high	medium	low
Stream bank fencing	2	5	0
Increased manure/slurry storage	5	1	1
Separation of clean and dirty water	1	5	1
Nutrient management planning	0	6	1
Livestock crossing points	0	5	2
Creation of wetlands/ponds	0	2	5

4. CLOSING REMARKS AND RECOMMENDATIONS

The event achieved its aim of generating discussion and debate between regulators, scientists, interested catchment stakeholders and the farming community of the Water of Fail catchment. Farmer focus groups such as this do raise awareness not only among the participating farmers in terms of learning about mitigation effectiveness and funding opportunities, but also among the science providers and practitioners in terms of listening to local knowledge and reasoning behind attitudes to decision making. It was pleasing to hear that the majority of farmers found the event useful but disappointing that a greater number of the farming community had not attended the event. Feedback from this particular sample of farmers suggested that there is still much to do in terms of communicating the message and value of fundamental management strategies (such as nutrient management planning) to reduce diffuse pollution from agriculture. Options such as streambank fencing and increased manure storage are perhaps viewed as more obvious mitigation strategies with clear and direct impacts on water quality through restricting access of livestock to streams and greater flexibility of managing risk through better timing of manure applications but further awareness of the value (both environmentally and financially) of nutrient management planning is clearly needed.

APPENDICES: Appendix 1: questionnaire used at farmer focus group

**Water of Fail
Farmer Focus Group
Activity:
Rural Priorities
and Water Quality**

NAME OF PARTICIPANT (OPTIONAL): _____

In 2013, the funding for agri-environment/rural priorities will be revised by Scottish Government. Set out below are measures that currently receive funding either under Tier 2 SRDP grants, or under Land Managers Options. We would like your views on some of these measures. Pick one measure from each of the categories (LAND CONVERSION, LIVESTOCK MANAGEMENT, LAND MANAGEMENT and FIELD AND WATER MARGINS), which is most appropriate for your farm, and then please tell us:

- A. Have you implemented in the last 5 years?
- B. Would you include it in a future SRDP Tier 2 application
- C. Would you do it if directly funded under Land Management Options?
- D. What are the costs and benefits which affect your choices?

	A	B	C	D. Please summarise costs and benefits...
LAND CONVERSION				
Arable reversion to grassland areas within fields that are prone to flooding, runoff and/or erosion risk £240/ha for 5 years				
Woodland creation Native woodland, productive conifer, productive broadleaf, small scale woodlands £101–£229/ha plus initial planting grant				
Create, Restore and Manage Wetland supports the conversion of arable or improved grassland to wetland by raising water levels. £226/ha for 5 years plus capital costs				
Hedgerows and extended hedges creation and extension of width of hedges with adjacent undisturbed grass margins £0.53/m for 5 years				
LIVESTOCK MANAGEMENT				
Manure/slurry storage minimise clean water getting into manure/slurry stores manure storage facilities equipment to apply slurry or manure more efficiently up to 50% of capital costs				
Constructed Farm Wetlands (CFWs) 40% of eligible costs for planning, excavation, fencing and pipework				
Livestock tracks, gates and river crossings Supports improvements in tracks, gateways and river crossings in order to reduce the possible adverse effects of livestock on the water environment. Covers capital costs plus 50% of eligible actual costs.				

Pick one measure from each of the categories (LAND CONVERSION, LIVESTOCK MANAGEMENT, LAND MANAGEMENT and FIELD AND WATER MARGINS), which is most appropriate for your farm*, and then please tell us:

- A. Have you implemented in the last 5 years?
- B. Would you include it in a future SRDP Tier 2 application
- C. Would you do it if directly funded under Land Management Options?
- D. What are the costs and benefits which affect your choices?

	A	B	C	D. Give your reasons and comments...
LAND MANAGEMENT				
Soil and water management plan assess the risks to soil and water on the farm including soil erosion, compaction, structural degradation, and losses of organic matter and of nutrients. 40% to the cost of producing a nutrient management plan in any one year up to £300				
Nutrient Management Plan (eg PLANET) 40% to the cost of producing a nutrient management plan in any one year up to £300				
FIELD AND WATER MARGINS				
Buffer Areas for Fens and Lowland Raised Bogs grass/semi-natural vegetation buffer at least 10 metres in width break existing field drains and culverts; £286/ha for 5 years plus capital costs				
Water margins and enhanced riparian buffer areas To protect water margins from erosion and diffuse pollution, whilst encouraging the development of waterside vegetation that stabilises the banks and enhances biodiversity. This is a 5-year commitment : £286.63 per hectare of land managed under this Option per year plus capital costs e.g fencing and water troughs. Margins of between 3m and 24m depending on water type and width of waterbody.				

Give any other comments you want to make here...

Agriculture & Diffuse Pollution Management in the Water of Fail Catchment

Thanks for attending this evening meeting. We would appreciate any feedback on this event. Please provide a response to the questions below:

	Strongly agree	Agree	No comment	Disagree	Strongly disagree	Further comments
The four topics covered provided new information that I found useful						
The meeting has provided an opportunity to develop a better understanding of diffuse pollution issues						
I have a better understanding of what is required of land users						
The meeting provided an opportunity to hear about experiences from across the farming community						

<p>I would attend future evening events if the following topics were considered:</p> <p>[please list suggestions: e.g. specific management options or approaches, costs linked to mitigation, funding opportunities]</p>
1.
2.
3.

Please indicate the level of confidence you have in the following management options for helping to contribute towards a reduction in diffuse pollution from agricultural sources:

Management option	High	Medium	Low
Stream bank fencing			
Increased manure/slurry storage			
Separation of clean & dirty water			
Nutrient management planning			
Livestock crossing points			
Creation of wetland areas / ponds			

Comments:

Please indicate how practical you consider the following management options to be for implementing on your farm (where relevant):

Management option	High	Medium	Low
Stream bank fencing			
Increased manure/slurry storage			
Separation of clean & dirty water			
Nutrient management planning			
Livestock crossing points			
Creation of wetland areas / ponds			

Comments:

Finally, please take a moment to comment on why you think it is sometimes difficult to comply with GBRs in the Water of Fail subcatchment

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