

# DERWENT CATCHMENT MANAGEMENT

SEVERN  
TRENT

# WHAT IS CATCHMENT MANAGEMENT?

Catchment Management is the identification and subsequent management of risks to the water system through collaborative intervention with landowners and managers upstream of a sensitive receptor e.g. a drinking water abstraction or habitat



UK Groundwater Forum

# WHY CATCHMENT MANAGEMENT?

## Main regulatory drivers

- Water Supply (Water Quality) Regulations
- **Risk Assessment Requirement** – Drinking Water Safety Plans (DWSP)
- **Monitoring Requirements** – obligation to monitor pollutants identified through DWSP as likely to be present in source water
- **Wholesome Standards** - single pesticide 0.1 ug/l, total pesticides 0.5 ug/l
- Article 7 of Water Framework Directive
- National Environment Program (NEP)

## Other drivers

- It's more cost effective for our customers?
- Our customers and stakeholders strongly support greater catchment management and partnership working
- Difficult to remove some pesticides through traditional treatment methods

## OUR AMP6 STRATEGY IS TO USE CATCHMENT TECHNIQUES TO REDUCE DRINKING WATER FAILURES AND REDUCE CATCHMENT RISKS

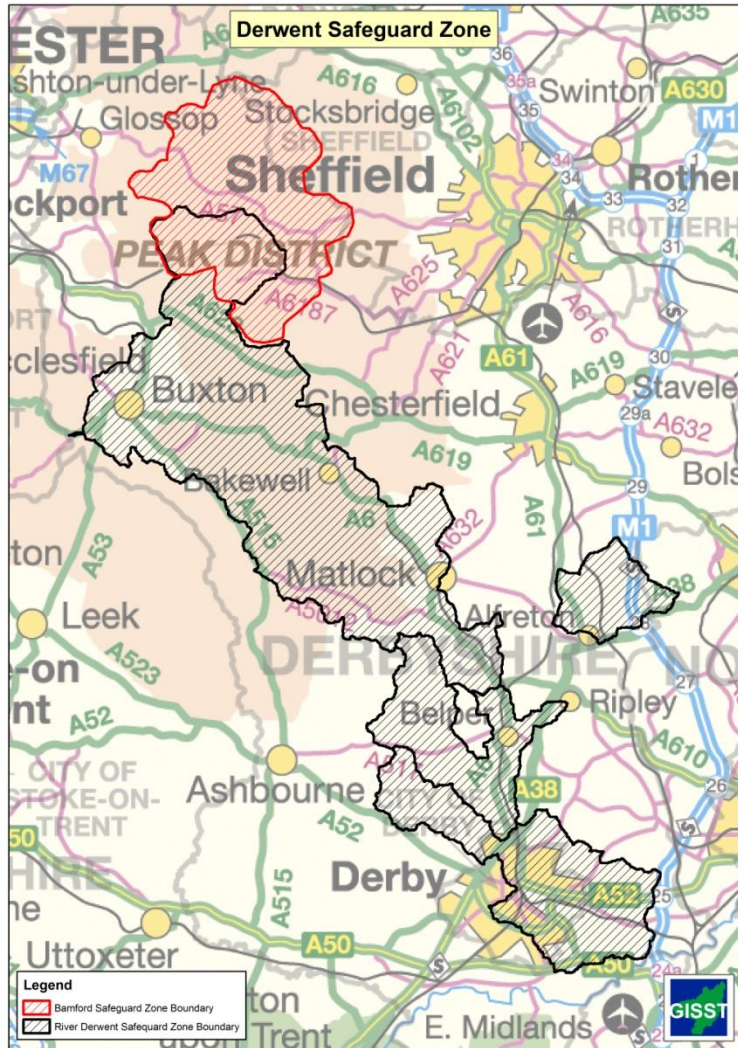
### Successful outcomes in our target catchments will mean:

- No metaldehyde failures on treated water or events relating to metaldehyde at our WTWs
- No deterioration in water quality at abstractions and safeguarded blends
- A reduction in peak pesticide concentrations
- Increased farmer engagement resulting in changes in farmer behaviour / land management

# WHAT IS A WATER SAFE GUARD ZONE (SGZ)?

- A SGZ recognises that one or more parameters threatens drinking water quality.
- SGZ's are set by the EA in consultation with water companies.
- In the Derwent catchment it is currently for;
  - Colour – erosion off the moors
  - Metaldehyde – found in slug pellets
  - Mecoprop – weed killer for broad leaved weeds
  - Nitrate – from fertilizers/manure
  - MCPA – weed killer for broad leaved weeds
  - Metazachlor – weeds and annual grasses/wild oats

# DERWENT CATCHMENT WATER SAFEGUARD ZONE



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- Farmers in the River Derwent water safeguard zones eligible for Severn Trent grants (as shown by the black and red boundary and hashed lines)
- Moors for the Future area (as shown by the red boundary and red hashed lines)

# WHAT'S AVAILABLE TO FARMERS IN THE DERWENT CATCHMENT?

- Severn Trent Environmental Protection Scheme Grants (STEPS) of up to £5,000 per year, plus Phosphate trial in the Wye catchment autumn 2018.
- Product substitution for metaldehyde (the active ingredient in slug pellets) using ferric phosphate payment of £8 per hectare.
- Pesticide Training PA2, PA4, PA6 limited places, priority given to farmers who engage on the STEPS and product substitution schemes.
- Farm advisory visits in partnership with Natural England.
- Annual Pesticide Amnesty
- Talks, events at Farms/Severn Trent Water sites.



# “STEPS” SCHEME

## SEVERN TRENT ENVIRONMENTAL PROTECTIONS SCHEME

- STEPS is a voluntary scheme and is funded by Severn Trent Water (STW). Applicants can apply for a new scheme once a year until 2020
- The aim of the scheme is to protect our water courses and the wider environment from diffuse pollution
- The level of financing varies depending on the item. A fixed rate is offered per item
- STEPS will offer a maximum payment of £5,000 per farm holding per year
- There will be no lower limit on the size of the grant
- Only one application can be made per farm per year
- Grants will only be available to land owners within the Severn Trent catchment scheme target area (EA- SGZ)
- We cannot fund any infrastructure directly linked to a regulatory requirement





# STEPS ITEMS

Code	STEPS Item/Measure	Fixed Grant Price
STEPS001	Watercourse Fencing	£3.90/m (Max)
STEPS002	Livestock Drinking Troughs	£100/unit
STEPS003	Pasture Pumps	£180/unit
STEPS004	Water Supply pipe	£2 per m
STEPS005	Solar Panel Pumps	£450 per unit
STEPS006	Hard Base for livestock drinking trough/feeder	£110/hard base
STEPS007	Pesticide Sprayer Washdown/Handling Area	£40/m <sup>2</sup>
STEPS008	Lined Biobeds (Either off set/Drive Over)	£70/m <sup>2</sup>
STEPS009	Pesticide Biofilter	£700
STEPS010	Disposal of pesticide washings via evaporation	£2500
STEPS011	Roofing for Pesticide Sprayer Wash-down Area	£52/m <sup>2</sup>
STEPS012	Installation of piped culverts in ditches	£160/unit
STEPS013	Roofs for existing Slurry stores	£52/m <sup>2</sup>
STEPS014	Floating covers for existing slurry stores	£6.50/m <sup>2</sup>
STEPS015	Roofing of existing manure storage and livestock holding areas	£52/m <sup>2</sup>
STEPS016	Arable grass margin: 6+ metre buffer	£100/ha
STEPS017	Livestock removal from high risk fields	£233/ha
STEPS018	Riparian margins – 12 metre buffer	£1.20 metre/year
STEPS019	Catch Crops	£60/Ha
STEPS020	Rainwater Harvesting	Underground tank £350/m <sup>2</sup> Aboveground Tank £110/m <sup>2</sup> Flush rainwater diverters & filters = £125 per unit
STEPS021	Cultivate and drill along the slope contour	£10 per ha
STEPS022	Manage overwinter tramlines	£10 per ha
STEPS023	Loosen compacted soil layers	£20 per ha
STEPS024	Grass swales	£8 per m <sup>2</sup>
STEPS025	Check Dams	£42 per unit
STEPS026	Field Drainage	£4.45/metre (max)
STEPS027	In ditch seepage barriers	£150 per barrier
STEPS028	In ditch wetlands	£250
STEPS029	Sediment Ponds/Traps	£15/m <sup>2</sup>
STEPS030	Constructed Farm Wetlands	£5 – 25 /m <sup>2</sup>
STEPS031	Bioreactors	£2000
STEPS032	Farmer Innovation	£5000 (Max)

- Example of grant items. Prices/options to be updated.
- STEPS 5 to be launched this autumn.
- Application period opens on 1<sup>st</sup> November 2018 and will close 31<sup>st</sup> January 2019.
- Farmer Innovation is also available however the proposed work must have a water quality or biodiversity benefit
- The STW contribution represents approximately 50% of the total cost
- NFU, Natural England, private contractors were consulted in the developing of fixed price grants

# SCORING CRITERIA

## Recognising previous engagement and high risk locations

- To be eligible applicants must farm within a Environment Agency Safeguard Zone
- Applications will score more highly where applications are for high priority items
- Applications will score more highly where they are in close proximity of a groundwater or surface water abstraction
- Applications will score more highly where applicants have signed up to one of our Metaldehyde Schemes if relevant
- Applications will score more highly where applicants have engaged with the STW catchment advisor and / or attended STW events
- **NOTE:** All applications are reviewed by internal assessment team at Severn Trent Water

Application forms and the STEPs handbook / Ts and Cs are available to download from the STW website

***Find out more about STEPS! Please visit:***

<https://www.stwater.co.uk/catchment>

# STEPS UPDATE

95 successful STEPS applications in the Derwent Catchment so far!

Applying for:

- Watercourse fencing
- Pesticide wash down area
- Pesticide Biofilter
- Livestock drinking troughs and surrounding hard bases
- Cover crops/cultivate across slopes
- Rainwater harvesting
- Roofing of existing manure storage and livestock holding areas
- Arable field margins
- Relocation of livestock from high risk fields
- Farmer innovation option – clean/dirty water separation, Invasive crayfish removal, GPS, seed drill, tracking
  
- 17 applications in the Wye catchment!

# REVERSE AUCTION PHOSPHOROUS TRIAL WYE CATCHMENT

- **Background:** STW has been asked by Ofwat to consider catchment management through a reverse auction-style scheme to farmers instead of through our current STEPS scheme.
- Reverse auctioning is the method by which Wessex Water and United Utilities deliver catchment management in their regions. Whilst the schemes have delivered appreciable nitrate reductions through this method, the success of this method in terms of farmer experience is not conclusive, especially in comparison to our current STEPS scheme.
- **Overall Aim:** To identify whether a reverse auction-style scheme is a more economically viable framework to deliver water quality and wider environment benefits than the current Severn Trent Environmental Protection Scheme (STEPS).

# WHY THE WYE CATCHMENT FOR THE TRIAL ?

- The majority of the WYE catchment is only achieving moderate status under the conditions set out by the EU Water Framework Directive (WFD). The Wye catchment is exceeding its phosphate targets.
- Historically most phosphate was attributable in the catchment to Sewage Treatment Works, with agriculture being the second largest contributor.
- Improvements to Buxton and Tideswell sewage treatment works by STW have met the industry's obligation to meet its proportionate share of phosphate reduction to meet the interim target however current technology does not allow for further reductions at our sewage treatment works

# REVERSE AUCTION

- STW have employed Exeter University to help design our Auction options - they have previous experience designing schemes for Wessex Water, United Utilities, and Anglian Water.
- Farmscoper has been used to help identify additional Phosphate options for the Wye, not already covered under our STEPS grant scheme.
- The proposed reverse auction Phosphate options are;
  1. Using low level inputs of manure/fertilizer
  2. No phosphate applications on high P-index soils
  3. Taking grassland areas out of management
  4. Establishing new hedges
- Depending on their location, farmers will be offered these options through a reverse-auction style scheme, or as fixed price items within the current STEPS scheme.
- All farmers will have the opportunity to apply for these items in addition to those we offer within the current STEPS Grant (£5000 plus Phosphate options).
- Farmers will be contacted by mail/phone/visit/livestock market event and will be eligible for a early bird sign up payment of £25 if they pick a Phosphate option. Dates TBC

# HOW THE AUCTION WORKS

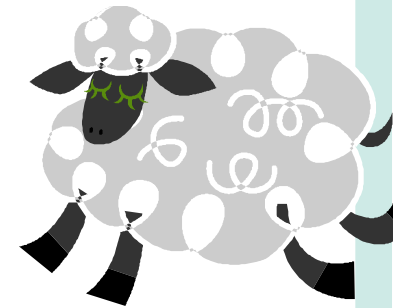
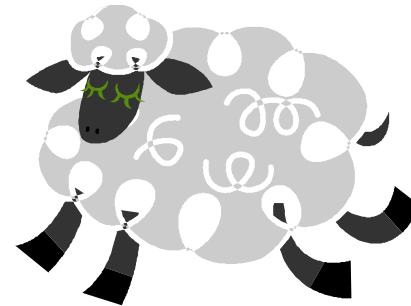
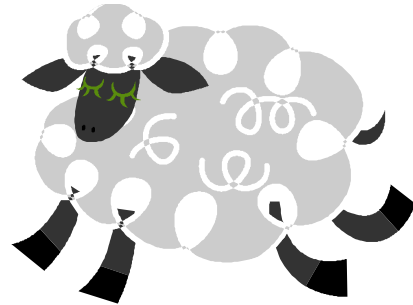
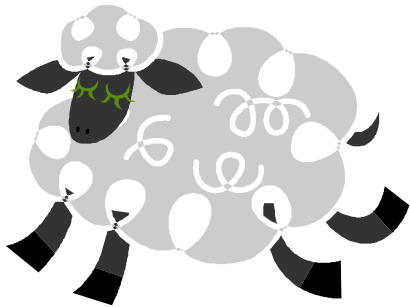
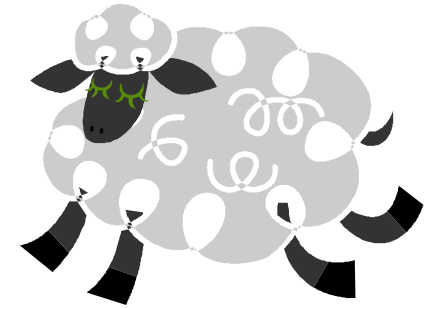
- Farms in the Wye will be split into 2 similar groups for the Phosphate trial
- Group 1 – Will have the fixed price Phosphate options, plus STEPS grant options. Fixed prices TBC.
- Group 2 – Will have the reverse auction multi-round bid Phosphate options, plus STEPS grant options. Farmers will be able to submit the price they wish to be paid for the Phosphate options (within reason!!), and will have the opportunity to resubmit their bid. Their bids will be assessed at HQ and farmers notified March/April 2019.



# FUTURE PARTNERSHIP WORKING

- Continue effective partnership working at Bakewell Livestock Market
- Host joint events
- Feed results from STW trail/grants back to key partners at the Derwent CaBa and farming sub-group meetings to support future funding bids/partnership working in the Derwent catchment.

**ANY QUESTIONS?**



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