



Severn Trent Environmental Protection Scheme

Applications open from
1st November - 31st January

STEPS - Options list

WONDERFUL ON TAP

SEVERN
TRENT

























Catchment priority

	Catchment	Catchment Type	Priority issue	Top Priority Item in catchment (others available)
	Amen Corner	Groundwater	Nitrate	STEPS 008 Cover Crops
	Astley	Groundwater	Nitrate	STEPS 008 Cover Crops
	Avon	Surface Water	Pesticides	STEPS 001 Pesticide washdown area
	Beckbury	Groundwater	Cryptosporidium	STEPS 013 Watercourse Fencing
	Bellington	Groundwater	Nitrate	STEPS 008 Cover Crops
	Bestwood	Groundwater	Pesticides	STEPS 001 Pesticide washdown area
	Boughton	Groundwater	Nitrate	STEPS 008 Cover Crops
	Bratch	Groundwater	Cryptosporidium	STEPS 013 Watercourse Fencing
	Brockhill	Groundwater	Nitrate	STEPS 008 Cover Crops
	Bourne and Blythe	Surface Water	Pesticides	STEPS 001 Pesticide washdown area
	Budby	Groundwater	Nitrate	STEPS 008 Cover Crops
	Budby Forest	Groundwater	Nitrate	STEPS 008 Cover Crops
	Chequer House	Groundwater	Nitrate	STEPS 008 Cover Crops
	Clipstone Forest	Groundwater	Nitrate	STEPS 008 Cover Crops
	Copley	Groundwater	Nitrate	STEPS 008 Cover Crops
	Cound	Surface Water	Pesticides	STEPS 001 Pesticide washdown area
	Cropston	Surface Water	Pesticides	STEPS 001 Pesticide washdown area
	Derwent	Surface Water	Pesticides	STEPS 001 Pesticide washdown area
	Dove	Surface Water	Pesticides	STEPS 001 Pesticide washdown area
	Grindleforge	Groundwater	Cryptosporidium	STEPS 013 Watercourse Fencing
	Haseley Springs	Groundwater	Pesticides	STEPS 001 Pesticide washdown area
	Hatton	Groundwater	Nitrate	STEPS 008 Cover Crops



	Catchment	Catchment Type	Priority issue	Top Priority Item in catchment (others available)
	Highgate	Groundwater	Cryptosporidium	STEPS 013 Watercourse Fencing
	Hilton	Groundwater	Nitrate	STEPS 008 Cover Crops
	Ketford	Groundwater	Nitrate	STEPS 008 Cover Crops
	Leam	Surface Water	Pesticides	STEPS 001 Pesticide washdown area
	Middle Severn	Surface Water	Pesticides	STEPS 001 Pesticide washdown area
	Mitcheldean	Surface Water	Pesticides	STEPS 001 Pesticide washdown area
	Newent	Groundwater	Nitrate	STEPS 008 Cover Crops
	Oakeley Farm	Groundwater	Nitrate	STEPS 008 Cover Crops
	Ogston	Surface Water	Pesticides	STEPS 001 Pesticide washdown area
	Poolend	Groundwater	Cryptosporidium	STEPS 013 Watercourse Fencing
	Puleston Bridge	Groundwater	Cryptosporidium	STEPS 013 Watercourse Fencing
	Rodway	Groundwater	Cryptosporidium	STEPS 013 Watercourse Fencing
	Rufford	Groundwater	Nitrate	STEPS 008 Cover Crops
	Ruyton	Groundwater	Nitrate	STEPS 008 Cover Crops
	Stoke on Terne	Groundwater	Nitrate	STEPS 008 Cover Crops
	Shropshire Middle Severn	Surface Water	Pesticides	STEPS 001 Pesticide washdown area
	Staunton Harold	Surface Water	Pesticides	STEPS 001 Pesticide washdown area
	Swynnerton	Groundwater	Cryptosporidium	STEPS 013 Watercourse Fencing
	Teme	Surface Water	Pesticides	STEPS 001 Pesticide washdown area
	Tittesworth	Surface Water	Pesticides	STEPS 001 Pesticide washdown area
	Wallmyres	Groundwater	Cryptosporidium	STEPS 013 Watercourse Fencing
	Worcester Severn	Surface Water	Pesticides	STEPS 001 Pesticide washdown area

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Pesticide sprayer washdown/handling area



What it is and how does this help my business?

Pesticide washdown and handling facilities are increasingly being viewed as the gold standard for pesticide management on farms.

Not only are they a safeguard should the worst happen, but they can also be highly beneficial to your business – providing a space to clean, store and work on your sprayer, and even incorporate your pesticide store, to improve efficiency.

As they are costly investments, 2-years' worth of STEPS funding can be secured in one application.

This funding – up to £10,000 - will be paid out to you over 2 years, to enable a complete washdown pad, roofing and a biobed/biofilter to be constructed.

Up to £10,000 match funding for washdown areas, roofing, biobeds and biofilters

Eligibility

Only the following options qualify for the pesticide washdown handling project:

STEPS001 - Pesticide sprayer washdown/handling area

STEPS002 - Roofing for washdown area

STEPS003 - Biobed

STEPS004 - Biofilter

All items must be specified in your application and constructed in year one of the STEPS agreement.

At least 2 items from STEPS001 - STEPS004 must be selected to qualify for the £10,000 offer.

Applicants may only apply for the offer once. Items may be applied for individually in subsequent STEPS rounds.

Advisory visit required

AV

To select a washdown area, you must have an expert advisory pesticide handling visit which can be arranged through your Agricultural Advisor. This is because there are a number of important regulations (listed over the page) to follow, and so you can maximise the benefit for your business.

Pesticide sprayer washdown/area project

Guidance

Location

Pesticide washdown and handling areas can vary greatly, depending on the needs of the farm. In general, washdown areas have two main components: A washdown pad, and a biobed or biofilter, to treat the washings. Often users choose to roof over their pesticide washdown areas or place them in a dedicated building, and add rainwater harvesting equipment. An example of a typical handling area is shown on page 10 and detailed specifications for each of the components can be found on pages 7-16.

How the offer works

Up to £10,000 of funding is made available by spreading STEPS grants for pesticide handling options over 2 consecutive years, but constructing them at the same time in order to create a complete pesticide washdown and treatment facility.

The offer only applies if you are constructing more than one item e.g. a pad and a biofilter. Applications for a single item from the list above are limited to £5000 as normal.

How is the grant paid?

You have until March 1st the following year to get the work done. STEPS claims for fixed price pesticide items up to £5000 may be awarded as soon as the work is completed. However any works beyond the £5000 value will be treated as an advanced grant for the following STEPS period (up to £5000). The remaining balance will be paid in the following financial year.

Because up to £10,000 STEPS funding is secured over 2 years, farms which apply for this option and use the full grant amount will be unable to apply for STEPS in the following year. Farms which do not use the full grant amount, may submit a grant application for items up to the remaining value in the next STEPS period. These applications will be subject to our scoring process.

Example:

A farm applies to STEPS to construct a brand new pesticide washdown pad together with a ready-made biofilter and roofing.

The combined value of the three grants is £6760.

Under the handling area offer, work should be done at the same time. Once completed, the farmer submits a claim for the work.

The initial £5000 is paid on completion of the work.

The remaining £1760 is then paid after April 1st (i.e. in the following financial year).

Pesticide sprayer washdown/handling area



How does this help the environment?

A pesticide handling and washdown area provides a dedicated space where pesticides can be safely loaded into sprayers, and acts as a safe area for housing the sprayer and for sprayer cleaning.

- 40% of pesticide detections in our catchments are from contamination when handling pesticides.
- The remaining 60% of pesticide detection comes from the field.
- Managing the washings and wastes that come from pesticide handling is one measure that can be taken to help keep pesticides out of water.

How does this help my farm business?

Pesticide handling areas and the associated treatment facilities are great for demonstrating that your farm is serious about chemical and pollutant management. It can also improve the efficiency of your operation and by reducing the losses of pesticide products, improves the safety for staff. It's an ideal place to park the sprayer too.



STEPS001

Grant value: £40 per m²

Up to £10,000 of funding is available for development of washdown and treatment facilities



Eligibility

STEPS001 is a priority item for pesticides

Please check with your Severn Trent Agricultural Advisor to check eligibility.

This item can be applied for in conjunction with:

STEPS002 - Roofing for washdown area

STEPS003 - biobeds

STEPS004 - biofilters.

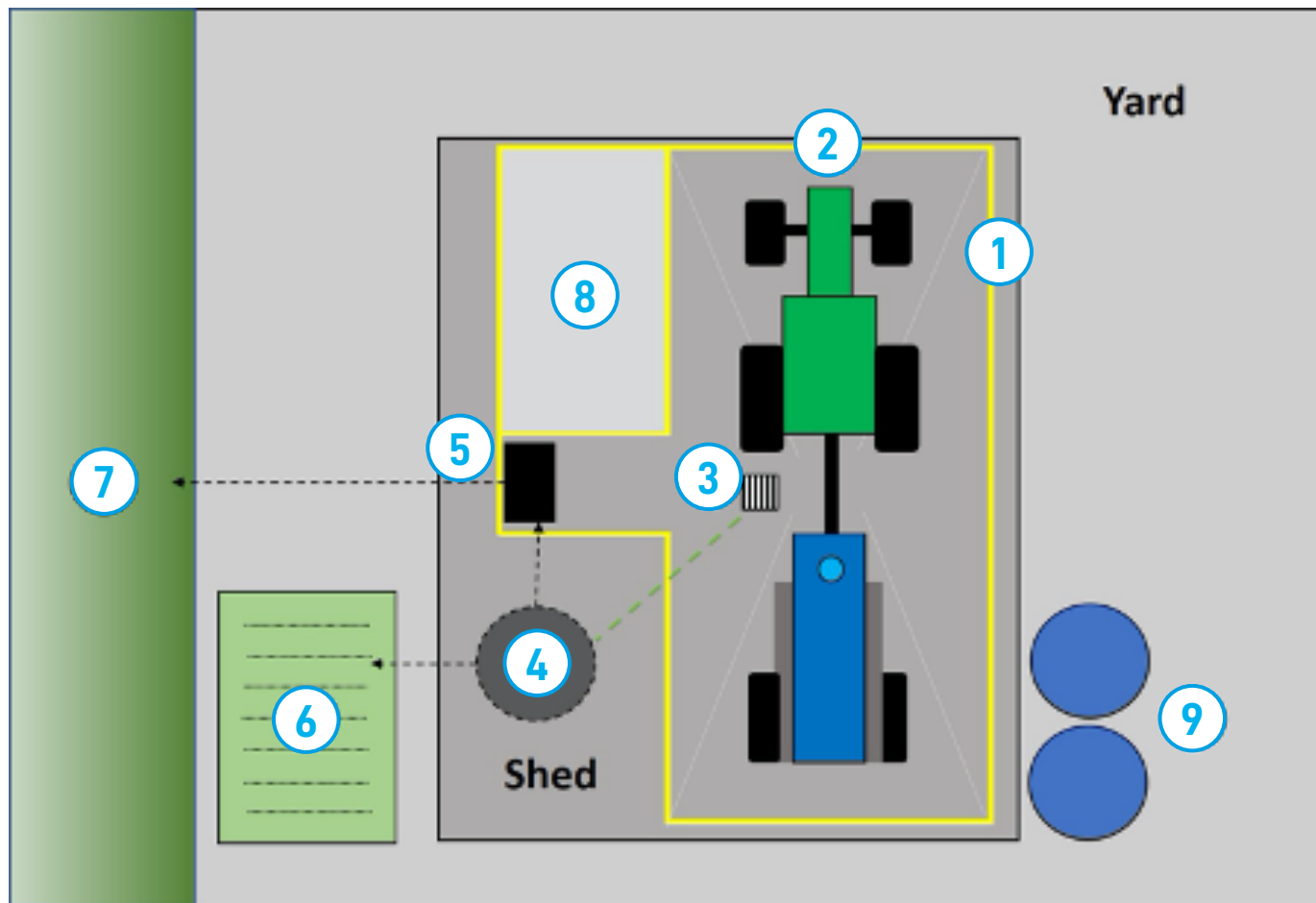
Advisory visit required



To select a washdown area, you must have an expert advisory pesticide handling visit which can be arranged through your Agricultural Advisor. This is because there are a number of important regulations (listed over the page) to follow and so you can maximise the benefit for your business.

STEPS001 Pesticide sprayer washdown/handling area

What does a pesticide washdown area look like?



- 1 Bunded pesticide washdown area (yellow line) not including pesticide store (8) -** ideally located under cover or in an existing shed. The pad is sealed reinforced concrete and large enough to comfortably park the tractor and sprayer and allow room to walk around the machine. This example also incorporated the biofilter and the pesticide store in the area to capture any spills. New roofing is available as **STEPS002**.
- 2 Access ramps -** The bund has appropriately formed ramps to allow ease of access for the tractor and sprayer.
- 3 Drain with sediment trap -** The bunded area falls to a drain (1:100) with an integral sediment trap; (consider appropriate siting to avoid problems associated with attaching/detaching machines and dropping small items i.e. keys and phones) this is connected to the pesticide washings storage tank (4). The cost of this drain is included in the grant price **STEPS001**.
- 4 Pesticide washing storage tank -** This tank should only contain a maximum of 1500 L of dilute washings at any time to meet regulatory requirements, although some farms opt for a larger tank to provide extra assurance against larger spills. This can be then fitted with a float switch for regular emptying during normal use. Cost of this tank and submersible pump is included in the grant price **STEPS001**.

5 Biofilter – Washings are treated by being pumped into a biofilter (**STEPS 004**), which must also be sited in the bunded area. Biofilters are a series of 3 IBCs filled with biomix (a soil, compost and straw mix) through which washings are circulated to break down pesticides. Biofilters have a small footprint and so easily fit in the corner of a shed. Or

6 Lined biobed - Alternatively washings may be treated in a biobed (**STEPS 003**). These are lined pits filled with biomix and covered with turf, over which washings are dribbled before being collected in a sump. Biobeds are more complex than biofilters but can be sized according to the volume of washings being passed through them, and so are best suited to large operations.

7 Vegetated area – once fed through the biofilter or biobed, treated washings should be dribbled on to an appropriately sized vegetated area.

8 Pesticide Store – A secure pesticide store is regulatory requirement for farms and should be independently bunded to 110 or 185% of content volume depending on if you are located in a Drinking Water Protected Area. Although stores cannot be funded through STEPS, many farms choose to relocate their existing store within the footprint of the new washdown/handling facilities to speed up filling operations and reduce the risk of spills when undertaking spraying operations.

9 Rainwater Harvesting tanks – filtered rainwater may be harvested from the washdown area roof (**STEPS 021**) and used for filling or washing down the sprayer. Tanks can be fitted with a mains top up facility ensuring that the Water Supply and Fittings regulations are complied with.

Environment agency exemptions for biobeds and biofilters

- The Environment Agency should be contacted regarding site specific advice and regulatory matters on their customer enquiries line: **03708 506506**.
- Biobeds/biofilters require an Environment Agency T32 waste exemption to legally treat dilute pesticide washings. These may be applied for free online.
[Go online and search: gov.uk/guidance/waste-exemption-t32-treatment-of-waste-in-a-biobed-or-biofilter](https://gov.uk/guidance/waste-exemption-t32-treatment-of-waste-in-a-biobed-or-biofilter)
- A U10 allows waste biomix from the biobed (when it has come to the end of its working life) to be composted for a year and then spread to land.

For spreading exemptions, go online and search: gov.uk/guidance/waste-exemption-u10-spreading-waste-to-benefit-agricultural-land

or

gov.uk/guidance/waste-exemption-u11-spreading-waste-to-benefit-non-agricultural-land

- It is acceptable to apply for a STEPS grant without exemptions in place but you should ensure they have been obtained prior to the work being completed.

STEPS001 Pesticide sprayer washdown/
handling area





STEPS001

Pesticide sprayer washdown/handling area

Guidance

Location

Pesticide handling and washdown areas cannot be constructed:

- Within 10m of a watercourse
- Within 50m of a spring, borehole, well or reservoir
- Within 250m of a borehole used to supply water for producing domestic food without prior agreement from the Environment Agency (EA)
- In a groundwater source protection zone 1 or 2
- In areas liable to flooding or influenced by a high water table. This may be checked using Magic Maps magic.defra.gov.uk/magicmap.aspx
- On historic or archaeological features, areas of wildlife value identified on the Farm Environmental Record (FER), the Environmental Information Map, or Historic Environment Farm Environment Record (HEFER)
- You must obtain the necessary consents and waste exemption from the Environment Agency (EA). This can be done after you apply for a STEPS grant but must be submitted before your grant is approved
- The washdown pad should not be used as a general washdown and cleaning area for other farm equipment. Oil and grease washed into the treatment apparatus may lead to damage or inefficient function.

Washdown area construction

Install a concrete bunded loading area, holding tanks, and fixed pumps and pipes to remove washings from the tank, as follows:

- The grant funding for this item includes the cost for the necessary drainage, bunding and holding tank, which must be installed. Washdown areas constructed without these elements cannot be funded
- Remove topsoil and excavate an area for the washdown area and tank
- Remove or divert any field drains that cross the site
- Cover the site with 140mm to 160mm of well compacted hardcore and at least 25mm of sand blinding
- Lay a damp-proof membrane weighing at least 1200g per square metre
- Lay a reinforced concrete slab at least 150mm thick to falls of at least 1:100
- Construct a concrete bund around the perimeter of the slab, making sure that all concrete joints are sealed with a proprietary sealant
- The bund must be suitably sized so that it can retain liquids
- The concrete bunded area should be as wide as the sprayer plus 2m, and as long as the sprayer plus 1.5m. You can tailor the area of the pad to your specific requirements.



STEPS001 Pesticide sprayer washdown/ handling area

- The bunded concrete slab must contain a slotted-cover type drain connected to a silt trap with a removable cover that has a nominal capacity of 250mm below the inlet
- Alternatively, lay the concrete so it is sloping 4 ways to a drain in the centre of the slab - the drain should have a silt trap within it
- Direct the drain containing the silt trap to a tank or chamber (no larger than 1500 litres) from which pesticide washings can be pumped and disposed of
- The holding tank must be made from seamless polyethylene, glass-reinforced plastic (GRP) or pre-cast concrete
- If there is no roof or cover, the holding tank should be sized according to local rainfall and the area of concrete pad
- The whole structure must be impermeable
- Inspect the concrete slab and bund regularly and repair any damage or deterioration. The pumps will also need to be checked regularly to make sure they are operating properly
- Construction of a pesticide sprayer loading or washdown area, for crop sprayers will require arrangements to be made for the disposal of washings and/or drainage water either by a specialist waste removal contractor or through treatment in a biobed, bunded biofilter
- You should state on your application how you intend to dispose of any pesticide washings, if not also selecting a biobed or biofilter
- If coupled to a biobed or biofilter, the pesticide washings from the loading and washdown area collected in the holding tank should be pumped before the tank reaches capacity using a pump float switch.



This option is subject to a 10-year agreement.

This will be highlighted in the agreement if your grant application is successful and you decide to proceed.

Roofing for pesticide sprayer washdown area

How does this help the environment?

Roofing a pesticide washdown area minimises the amount of rainfall, which would otherwise be collected and need to be disposed of, in either a biobed, biofilter or evaporation unit.

This means that you have less liquid to run through your treatment apparatus and fill up storage tanks.

How does this help my farm business?

Excluding rainfall from your washdown area means more washings can be treated in the biobed/filter.

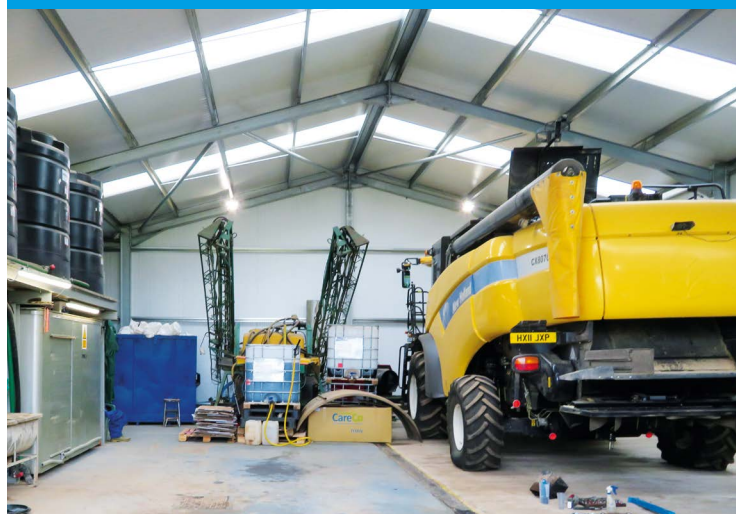
It also provides a useful shelter in which your sprayer can be stored prepared and filled. This often reduces the need for anti-freeze use during storage, and creates better working conditions for the operators.



STEPS002

Grant value: £52 per m²

Up to £10,000 of funding is available for development of washdown and treatment facilities and treatment facilities



Eligibility

STEPS002 is a priority item for pesticides

Please check with your Severn Trent Agricultural Advisor to check eligibility.

This option is available to cover either a newly constructed washdown area, or one which has already been built.

Advisory visit required

AV

If selecting this option as part of a new pesticide handling area, you must have an expert advisory pesticide handling visit which can be arranged through your Agricultural Advisor. This is because there are a number of important regulations to follow and so you can also maximise the benefit for your business.

STEPS002 Roofing for pesticide sprayer washdown area

Guidance

- Pesticide handling areas, and the treatment facilities which are to be roofed over, must be bunded and meet current Environment Agency regulatory requirements
- The constructed roof must cover the bunded area, plus a 1.5m overhang on all sides. Any additional roofing required beyond this specification must be fully funded by the applicant
- An overhang is not required where the bunded area is fully enclosed by solid walls
- The work may include foundations, supporting structure, roof sheeting (must be impermeable to rainwater), guttering and the installation of clean water drains
- Guttering and drains must direct roof water to a clean water drain or rainwater storage tank. Please see **STEPS021** – Rainwater harvesting for additional options
- Side walls and shades can also be built with your roof. This work would not be covered by the STEPS grant and would therefore be at your own expense. Any additional building must comply with any consent/permits acquired
- Your claim will be based on the erected roofed area in m²
- The foundations, support structure and roof must comply with the relevant parts of BS 5502.



This option is subject to a 10-year agreement.

This will be highlighted in the agreement if your grant application is successful and you decide to proceed.

Drainage works must comply with:

BS 8000
BS 8500
BS EN 752
BS EN 206-1:2000
BS 6213:2000+A1:2010
BS EN 1610.

Lined biobeds (either off-set/drive over)

How does this help the environment?

A biobed provides a simple method for on-farm treatment of dilute pesticide wastes. The biomix in the biobed allows any pesticides within the waste liquid to lock onto the organic matter. The bacteria within the soil and the biomix then slowly break down the pesticide residues.

- 40% of pesticide detections in our catchments are from contamination when handling pesticides.
- The remaining 60% of pesticide detection comes from the field.
- Managing the washings and wastes that come from pesticide handling is one measure that can be taken to help keep pesticides out of water.

How does this help my farm business?

Pesticide treatment facilities, such as biobeds and biofilters, are great for demonstrating that your farm is serious about chemical and pollutant management. They give peace of mind that, should the worst happen, there are extra barriers in place between contamination and the environment.



STEPS003

Grant value: £70 per m²

Up to £10,000 of funding is available for development of washdown and treatment facilities



Eligibility

STEPS003 is a priority item for pesticides

Please check with your Severn Trent Agricultural Advisor to check eligibility.

This item can be applied for in conjunction with: **STEPS001** - Pesticide sprayer washdown handling area and **STEPS002** - Roofing for washdown area.

Biobeds are not a substitute for best practice and every effort should still be made to avoid spills or splashes of pesticide concentrates during sprayer cleaning.

Advisory visit required

AV

To select a biobed, you must have an expert advisory pesticide handling visit which can be arranged through your Agricultural Advisor. This is because there are a number of important regulations you need to follow and which will also help maximise the benefit to your business. These can be found in the guidance over the page.

STEPS003 Lined biobeds (either off-set/drive over)

Guidance

Location

Biobeds cannot be constructed:

- Within 10m of a watercourse
- Within 50m of a spring, borehole, well, or reservoir
- Within 250m of a borehole used to supply water for producing domestic food without prior agreement from the Environment Agency (EA)
- In a groundwater source protection zone 1 or 2
- In an area liable to flooding or influenced by a high water table
- On historic or archaeological features, areas of wildlife value identified on the Farm Environmental Record (FER), the Environmental Information Map, or the Historic Environment Farm Environment Record (HEFER)
- You must obtain relevant necessary consents and waste exemption from the Environment Agency (EA). This can be done after you apply for a STEPS grant but must be submitted to us before your grant is approved.

Biobed construction

Below-ground biobed:

- The surface area of a biobed needs to be big enough to handle all planned sprayer washings and any associated rain water – general recommendations are that you should allow approximately 1m² for every 1000 litres of water
- Excavate an area for the biobed
- Remove and block off any field drains
- Compact the sides of the earth bank to a slope of 30 to 35 degrees (about 1 in 1.5) towards the base
- Lay an impermeable synthetic liner at least 1.2mm thick (pesticide grade) on top of a geotextile membrane underlay (190g per square m) and 25mm of sand blinding
- Works must meet relevant British Standards. Go online to [BSIgroup.com](https://www.bsigroup.com) and search the standards database.

Above-ground biobed:

- Use pre-cast or reinforced concrete and a 1.2mm thick liner, or an impermeable pesticide grade container
- Follow the liner manufacturer's installation instructions
- Any necessary holding tanks, pumps and pipes must then be installed for the below or above-ground biobed.

Biobed outlet:

- Fit the biobed with a sump at the lowest point
- Create an internal sump when digging the biobed pit
- Lay the liner to incorporate the sump
- Make sure the liner is not perforated
- Insert a central, permeable, vertical access tube (0.5m in diameter) to allow water to flow into the sump base
- Install a pump within the tube, operated by a float switch setting
- Place a ring of perforated drainage pipe into the base of the biobed on top of the liner to assist the pump flow
- Install pumps to carry the treated discharge from the biobed to a vegetated area for irrigation; or pump it to a storage tank for irrigation or re-use.

Further guidance may be found at:
voluntaryinitiative.org.uk/water/biobeds/



This option is subject to a 10-year agreement.

This will be highlighted in the agreement if your grant application is successful and you decide to proceed.





STEPS003

Lined biobeds

(either off-set/drive over)



Preparation of the biomix:

- Mix one part peat-free compost, one part topsoil and 2 parts straw (wheat or barley) by volume
- Allow the biomix to compost for 30 to 90 days before using it to fill the biobed to an effective depth of 1m, topping it up if there is any settlement
- Use at least 1m³ of biomix for every 1000 litres of liquid treated in any 12 month period
- Turf over the biomix
- Lay perforated pipes to distribute pesticide washings across the surface
- The biobed does not need a cover or roof.

Biobed operation for offset biobeds

Collect pesticide washings from an existing pesticide loading and washdown area in a storage tank then pump them for treatment in the offset biobed.

For drive-over biobeds:

- Construct a bunded drive-over grid above the biobed, with supporting foundations
- Make sure the grid and its foundations are suitable for the loading of any equipment driven over the grid.

Biobed maintenance:

- Add fresh, pre-composted biomix to the biobed every year to maintain 1m depth. Replace the biomix every 5 years
- Hazardous waste, fertilisers or fuel and oils must not be treated in the biobed.

Environment agency exemptions for biobeds and biofilters

- The Environment Agency should be contacted regarding site specific advice and regulatory matters on their customer enquiries line: **03708 506506**.
- Biobeds/biofilters require an Environment Agency T32 waste exemption to legally treat dilute pesticide washings. These may be applied for free online.
[Go online and search: gov.uk/guidance/waste-exemption-t32-treatment-of-waste-in-a-biobed-or-biofilter](https://gov.uk/guidance/waste-exemption-t32-treatment-of-waste-in-a-biobed-or-biofilter)
- A U10 allows waste biomix from the biobed (when it has come to the end of its working life) to be composted for a year and then spread to land.

For spreading exemptions, go online and search: gov.uk/guidance/waste-exemption-u10-spreading-waste-to-benefit-agricultural-land

or

gov.uk/guidance/waste-exemption-u11-spreading-waste-to-benefit-non-agricultural-land

- It is acceptable to apply for a STEPS grant without exemptions in place but you should ensure they have been obtained prior to the work being completed.

STEPS004 Pesticide biofilter



Pesticide biofilter

Biofilters are not a substitute for best practice and every effort should still be made to avoid spills or splashes of pesticide concentrates during sprayer cleaning.

How does this help the environment?

A biofilter provides a simple low-cost method for on-farm treatment of dilute pesticide wastes. The biomix inside allows any pesticides within the waste liquid to lock onto the organic matter. The bacteria within the soil and the biomix then slowly break down the pesticide residues.

- 40% of pesticide detections in our catchments are from contamination when handling pesticides.
- The remaining 60% of pesticide detection comes from the field.
- Managing the washings and wastes that come from pesticide handling is one measure that can be taken to help keep pesticides out of water.

How does this help my farm business?

Pesticide treatment facilities, such as biobeds and biofilters, are great for demonstrating that your farm is serious about chemical and pollutant management. They give peace of mind that should the worst happen, there are extra barriers in place between contamination and the environment. Biofilters have a small footprint and can be easily accommodated in the corner of a shed or yard.



STEPS004

Grant value: See table

Up to £10,000 of funding is available for development of washdown and treatment facilities



Eligibility

STEPS004 is a priority item for pesticides

Please check with your Severn Trent Agricultural Advisor to check eligibility.

This item can be applied for in conjunction with:

STEPS001 - Pesticide sprayer washdown/handling area and

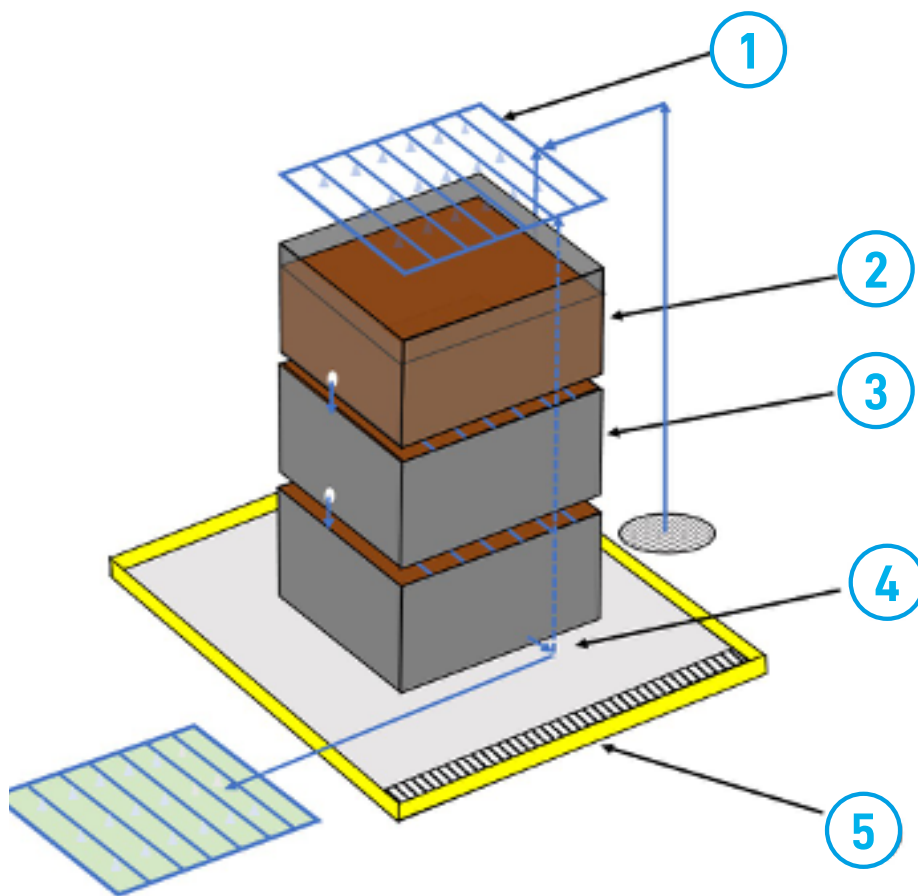
STEPS002 - Roofing for washdown area.

Advisory visit required



To select a biofilter, you must have an expert advisory pesticide handling visit which can be arranged through your Agricultural Advisor. This is because there are a number of important regulations (listed in the guidance overleaf) to follow and so you can also maximise the benefit for your business.

STEPS004 Pesticide biofilter



What does a biofilter look like?

- 1 Washings are pumped from the washdown pad holding tank to the top of the biofilter where they are distributed evenly over the area of the biofilter through a dribble bar. The pump should be sized/regulated to ensure that the biofilter isn't water logged. Washings drain through the biomix via gravity. An outlet at the bottom of the IBC feeds liquid into dribble bars in the next stage of the biofilter.
- 2 Biomix made of 25% topsoil, 25% Peat free compost and 50% straw (by volume). This should be composted for 30 – 90 days before use and kept moist.
- 3 New IBCs, or similar filled with biomix. Pea gravel or similar drainage media is used to create a drainage layer on the bottom of the biofilter box, then lined with 'Terram' type membrane and the biomix added. These biofilter boxes will periodically require topping up.
- 4 Outlet from the bottom IBC to allow drainage to a vegetated area where treated washings may be dribbled on to the soil surface. Alternatively, if fitted with a pump, washings may be recirculated back to the top IBC to allow further treatment and to keep the biomix moist.
- 5 The biofilter should be located within the bunded area draining back to the holding tank in order to contain any leaks and spills. Biomix should be changed at least every 5 years.



STEPS004

Pesticide biofilter

Guidance

Location

- Biofilters cannot be constructed within 10m of a watercourse
- Biofilters cannot be constructed within 50m of a spring, borehole, well, or reservoir
- They cannot be constructed within 250m of a borehole used to supply water for producing domestic food without prior agreement from the Environment Agency (EA)
- They cannot be constructed in a groundwater source protection zone 1 or 2
- The site must not be liable to flooding or influenced by a high water table
- They cannot be constructed on historic or archaeological features areas of wildlife value identified on the Farm Environmental Record (FER), the Environmental Information Map, or the Historic Environment Farm Environment Record (HEFER)
- You must obtain relevant advice from an expert, together with the necessary consents and waste exemption from the Environment Agency (EA). This can be done after you apply for a STEPS grant but must be submitted to before your grant is approved
- Biofilters must be located within their own bunded area or within the bund of the main pesticide washdown area.

Biofilter grant options

- There are now numerous companies specialising in biofilters, with many offering ready-made examples that simply require assembly on farm. Alternatively biofilter kits for use with IBCs are also available at a lower cost but require more time and maintenance. The difference in the cost of these options is reflected in the grant value shown



This option is subject to a 10-year agreement.

This will be highlighted in the agreement if your grant application is successful and you decide to proceed.

- If choosing the ready-made biofilter, an invoice for the item must be submitted with your claim form.

Environment Agency exemptions for biobeds/biofilters

- The Environment Agency should be contacted regarding site specific advice and regulatory matters on their customer enquiries line: **03708 506506**
- Biobeds/biofilters require an Environment Agency T32 waste exemption to legally treat dilute pesticide washings. These may be applied for free online

Go online and search: gov.uk/guidance/waste-exemption-t32-treatment-of-waste-in-a-biobed-or-biofilter

- A U10 or U11 allows waste biomix from the biobed (when it has come to the end of its working life) to be composted for a year and then spread to land

For spreading exemptions, go online and search: gov.uk/guidance/waste-exemption-u10-spreading-waste-to-benefit-agricultural-land or gov.uk/guidance/waste-exemption-u11-spreading-waste-to-benefit-non-agricultural-land

- It is acceptable to apply for a STEPS grant without exemptions in place but you should ensure they have been obtained prior to work being completed.

Getting further design advice

- Talk to your local Agricultural Advisor who will be able to arrange for an industry expert to conduct a free pesticide handling advice visit
- Further design advice is available on how to size the pesticide handling facilities and on pesticide washing volume calculations, from Catchment Sensitive Farming - Go online to gov.uk and search for [guidance/catchment-sensitive-farming-reduce-agricultural-water-pollution](https://gov.uk/guidance/catchment-sensitive-farming-reduce-agricultural-water-pollution) or go to the biobed manual at voluntaryinitiative.org.uk/en/water/biobeds

STEPS004 Pesticide biofilter

Constructing a DIY biofilter

- Use three **new**, chemical-resistant impermeable containers - these will typically be 1000 litre IBCs stacked vertically
- Store pesticide washings in additional containers next to the IBCs, either before or after treatment
- Alternatively, pump the washings directly from an underground storage tank that collects washings from a pesticide handling area
- Cut the tops off the IBCs, leaving the corners intact
- Insert wire mesh lining in the base of each one
- Cover the lining with a permeable membrane
- Install a layer (at least 10cm) of pea gravel over the membrane so that the drainage outlet to the container below is not blocked
- Make a biomix by mixing 1 part peat-free compost, 1 part topsoil and 2 parts straw (wheat or barley) by volume
- Allow the biomix to compost for 30 to 90 days before filling the IBCs
- Fill the IBCs with biomix, leaving a 10cm gap at the top for piping
- Allow the biomix to settle, then top up to a volume of at least 0.5 cubic metres of biomix in each one
- Stack the 3 IBCs vertically into a tower on a flat concrete base
- If the biofilter is not covered, replace the top of the uppermost container to prevent rainfall from getting in
- Install pumps, pipes and a hose to pump washings from the initial storage tank to the top biofilter container and on to the biomix through a piped ring distribution system
- Allow the washings to flow by gravity through the pipes to the containers below
- Pump discharge from the bottom container to a storage tank, or for direct irrigation through a perforated hose on a vegetated area
- Build a concrete bund at least 100mm high around the biofilter
- The biofilter must comply with relevant British Standards.
[Go online to BSIgroup.com](https://www.bsigroup.com) and search the standards database
- The biofilter can only treat up to 15,000 litres of pesticide washings (excluding rainfall) in any 12 month period.

Maintaining the biofilter

- Biofilters require moisture to work and benefit from periodically recirculating washings through them, particularly if kept under cover
- Fresh, pre-composted biomix should be added to the biofilter to maintain its depth. The biomix should remain moist, using irrigation if necessary. Care must be taken not to allow the container to overflow
- The biomix should be replaced every 5 years. The biofilter should not be used to treat hazardous waste, fuels, oils or fertilisers.

STEPS004 Fixed costs for biofilters

STEPS codes	Item	Fixed grant amount
STEPS004a	DIY biofilter	£950/unit
STEPS004b	Ready made biofilter	£1200/unit

Arable grass margins: 6m + buffer

How does this help the environment?

Grass margins in arable fields provide a habitat for all manner of flora and fauna, especially when enhanced with wild flower seed mixes. Buffer strips also capture run-off and nutrients from fields, preventing these from reaching watercourses.

What it is and how does this help my farm business?

Buffer strips can provide a refuge for a range of beneficial insects which may benefit your farm. As they intercept run-off pathways, they help to keep soil and nutrients on your farm, which helps you to meet the Farming Rules for Water regulations (2018).

Go online and search:
gov.uk/guidance/rules-for-farmers-and-land-managers-to-prevent-water-pollution

They can also be used to maintain margins from expired stewardship agreements.



STEPS005

Grant value: £1250 ha

Full payment received in first year. 5 year agreement - must maintain for 5 years



Eligibility

STEPS005 is a priority item for pesticides and nitrates

Please check with your Severn Trent Agricultural Advisor to check eligibility.

Applicants who apply for this option will be committing to maintaining a grass margin buffer zone for a 5-year period from the beginning of the agreement.

Upon entering into this 5 year agreement you will receive a single payment in year 1 of the agreement.

This single payment is expected to cover any maintenance for the 5 year period. Payments will be based on the area of land designated to the buffer zone.

STEPS005 Arable grass margins 6m + buffer

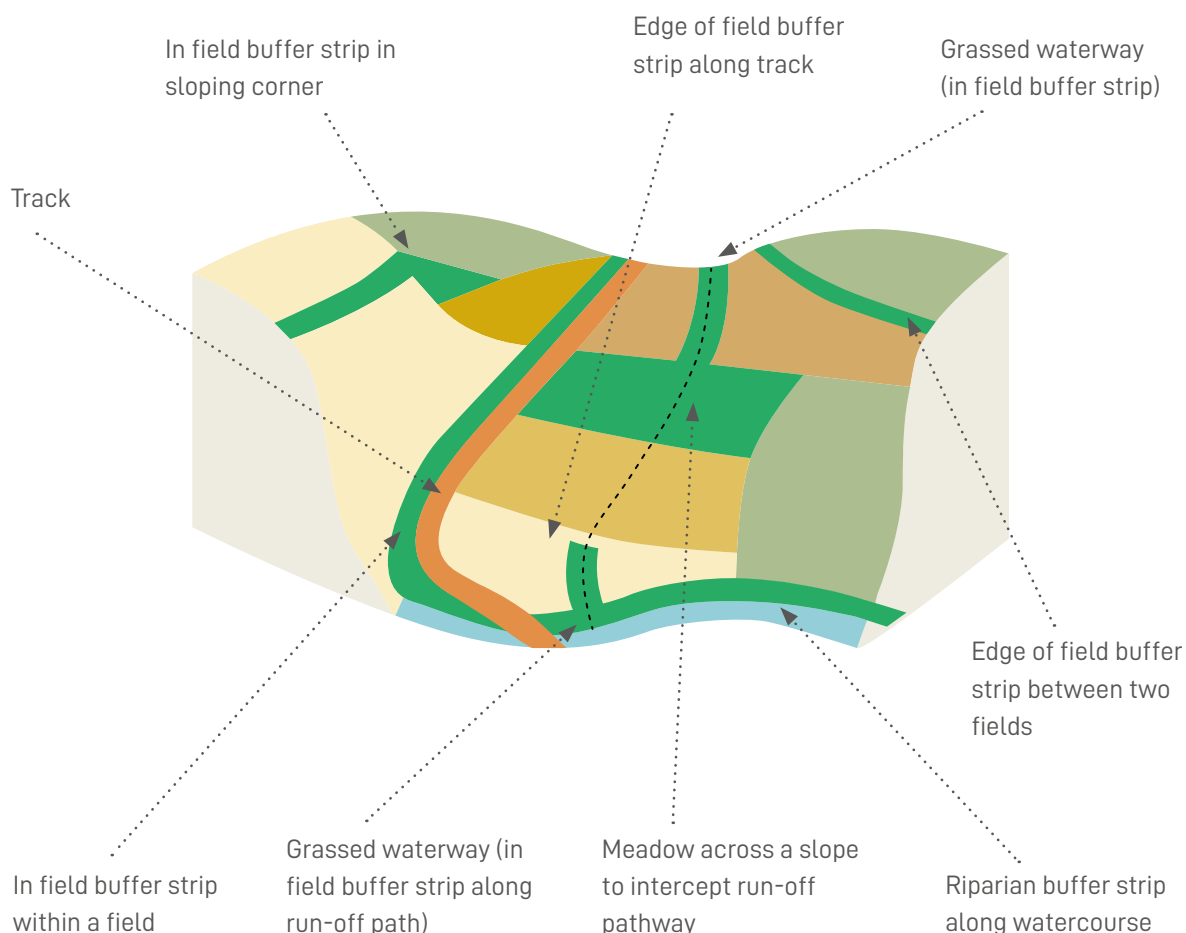
Guidance

The diagram below demonstrates the areas acceptable as buffer zones:

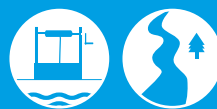
- Establish of a minimum 6m grass margin along arable field boundaries
- Existing margins established in expired stewardship schemes may be included
- Grass margins can also be placed in-field, depending on the topography
- Grass seed labels and receipts should be kept for the duration of the agreement
- Soil cultivation cannot be carried out once the margin is established
- Pesticides, fertiliser or lime cannot be applied to the grass margin
- Grazing is not permitted on the grass margin
- Margins may be used for intermittent access and turning, providing a healthy sward is maintained.
- Fertiliser may be used for crop establishment only
- The margin may be mowed and baled or topped annually, ideally after 15th July and should be maintained in order to preserve a healthy sward
- Any buffer zone created for Ecological focus Area (EFA, CAP greening criteria) cannot be claimed under STEPS. EFA is a regulatory requirement which cannot be funded by STEPS.

For guidance to the Basic Payment Scheme, go online and search for: **BPS 2020. (gov.uk/government/publications/basic-payment-scheme-rules-for-2020)**

- Unproductive field corners may be included in the area claimed at the discretion of your Agricultural Advisor
- The location of grass margins must be placed in arable fields and clearly marked on the submitted maps. The grass margin cannot be relocated to another field.



Riverside margins in grass fields



STEPS006

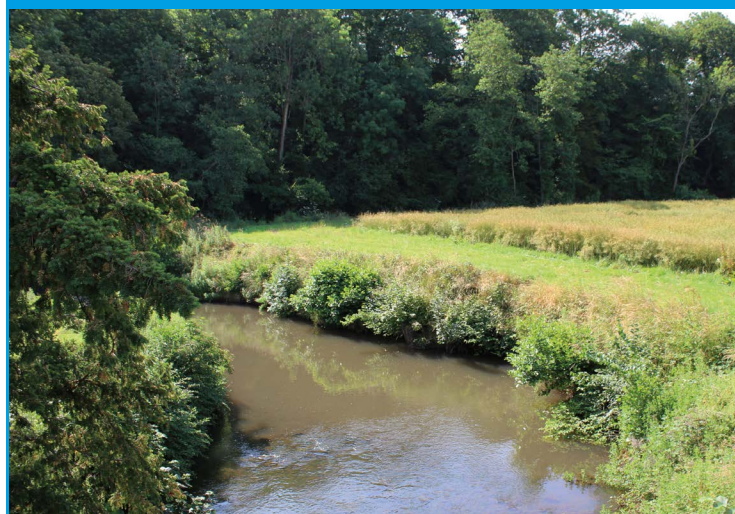
Grant value:
See table

How does this help the environment?

Livestock grazing in riverside areas can lead to harmful pathogens entering the water. Riverside margins will stabilise riverbanks and reduce soil erosion. Riverside margins also intercept run-off, reducing the risk of nutrients, pathogens and sediments entering water. Undisturbed margins can also boost biodiversity.

How does this help my farm business?

Buffer strips can provide a refuge for a range of beneficial insects which may benefit your farm. They can also be used to maintain margins from expired stewardship agreements.



Eligibility

STEPS006 is a priority item for pesticides and nitrates

Please check with your Severn Trent Agricultural Advisor to check eligibility.

Grass fields only.

Applicants who apply for this option will be committing to maintaining a grass margin buffer zone for a 5-year period from the beginning of the agreement.

Upon entering into this 5 year agreement you will receive a single payment in year 1 of the agreement.

This single payment is expected to cover any maintenance for the 5 year period. Payments will be based on the area of land designated to the buffer zone.

STEPS006 Riverside margin in grass fields

Guidance

- Applicants who apply for this option will be committing to maintaining grass margin buffer zone for a period of 5 years
- Margin width is measured from the top of the bank
- STEPS grants are based on the area of riverside margin using either a 15m or 30m wide buffer
- Pesticides, fertiliser or lime cannot be applied to the margin
- Livestock are not allowed to graze the margin from its date of establishment until the end of your STEPS contract
- The margin may be mown, but not between March 1st and August 16th
- Pre-existing margins established during expired stewardship schemes may be included
- The location of the riparian margin must be clearly marked on the map submitted with your STEPS application. Note, in order to maintain claims on your single farm payment scheme, a gate or moveable rail should be installed
- Riverside margin width and length is used in the STEPS grant calculation.

STEPS006 Payment rates for riverside margins

STEPS codes	Item	Fixed grant amount
STEPS006a	Riverside margins – 15m	£180 per hectare per year (£900 for a 5 year agreement)
STEPS006b	Riverside margins – 30m	£200 per hectare per year (£1000 per hectare for a 5 year agreement)

Example:

A farmer chooses to install 15m buffers along a watercourse. 500m of watercourse are protected by the buffer. Therefore their STEPS grant is:

500m x 15m margin

= 0.75 ha

= £750 for 5 years

Arable reversion into low input grassland

How does this help the environment?

This option will reduce nutrient losses and help stabilise the soil. This option is designed for highly targeted locations to help slow or reverse nutrient levels in groundwater.



STEPS007

Grant value: £1550 per hectare

Full payment received in first year
5 year agreement - must maintain
the same area for 5 years



Eligibility

**STEPS007 is a priority
item for nitrates**

It is only available
in Severn Trent Water
groundwater catchments.

This option is only applicable to
land that is currently used for
arable production.

Your local Agricultural Advisor
will determine if this is a suitable
option for your farm.



STEPS007 Arable reversion into low input grassland

Guidance

This is a 5 year agreement where you will receive a single payment in year 1 of your agreement.

- Applicants must submit evidence with their application that demonstrates a recommended fertiliser management system or evidence to support low intensity farming
- All records of all management activity undertaken on the parcel of land under this option, are to be kept on farm
- Applicants must establish a grass sward by October 1st of year 1 of the agreement
- Applicants cannot store farm yard manure in field
- * All livestock must be excluded from the land between October 1st to March 15th each year
- Supplementary feeding spots are not permitted, except for mineral blocks
- Livestock manure may be applied to supply up to 100kg of total nitrogen per ha per year. If livestock manures are not being applied, artificial nitrogen fertiliser can be applied at a total of 50kg/ha per year
- You must not apply manure within 50m of the boundary of any borehole, spring, reservoir or water course
- Applicants cannot use pesticides (herbicides, insecticides, fungicides, etc.), with the exception of herbicides to weed wipe or spot treat invasive non-native species
- Applicants cannot apply manure or fertiliser between August 15th and February 1st.

Alternative weed management in grassland fields

STEPS038

Grant value:
£ Bespoke/5yrs

How does this help the environment?

Herbicide use in grassland fields, though usually less frequent than on other agricultural land, is still a significant source of pollution to watercourses and drinking waters. While there can be no substitute for following best practice with pesticide application and land management, there are a number of alternative non-chemical methods available to control problematic weeds.

How does this help my farm business?

Some grassland weeds are poisonous to livestock (e.g. ragwort, bracken, charlock), and can have a major impact on forage yields and quality. Controlling them is an important part of grassland and livestock management. Incorporating non-chemical weed control into your business as part of Integrated Crop Management (ICM) may help reduce costs overall and allow flexibility in when weeds can be treated.



Eligibility

STEPS038 is a priority item for pesticides

Please check with your Severn Trent Agricultural Advisor to check eligibility.

Permanent grass fields only.

Grass fields must be being farmed.

Fields which do not already receive pesticide applications are not eligible for this STEPS item.

By taking up this STEPS item, you are committing to using non-chemical weed control only, for a period of 5 years.

You must provide pesticide application records for the parcel of land to demonstrate the current pesticide usage.

STEPS038

Alternative weed management in grassland fields



Guidance

There are a range of non-chemical controls which may be employed in grasslands and certain practices may not be suitable in some cases. If you are unsure, please speak to your Severn Trent Agricultural Advisor. You may select any non-chemical method for use, however common non chemical controls for grassland weeds may include:

Method

- Mechanical removal e.g. Topping, strimming, digging and weed pulling
£100/ha/5yrs.
- Weed removal tools
50% cost up to £5000
- Weed wands – either thermal or electrical
50% cost up to £5000
- Weed wipers (uses glyphosate but permitted for this option)
50% cost up to £5000

If you wish to use a method not on this list, please specify and add details and costs in your application.

IMPORTANT: Use of non-chemical weed control techniques requires careful and considered management to ensure that the management takes place at the correct weed growth stage. This will maximise its effectiveness, and reduce the risks posed to livestock from specific weeds e.g. Ragwort. Before changing your grassland management it is advised you consult with your agronomist.

Precision pesticide application technology for grasslands

STEPS039

Grant value:
50% up to £5000

How does this help the environment?

Precision spraying equipment can improve the accuracy and efficiency of pesticides beyond that possible with standard apparatus. By reducing overlaps and the quantity of chemical used, less pesticide product ends up within the environment. Best practice and responsible pesticide management should be used before this option is considered.

How does this help my business?

Introducing precision equipment to your farm can not only save you money through reducing the quantity of pesticide products used, but can also greatly improve efficiencies across your enterprise. Improved speed of field operations, reduced fuel usage and improvements to crop health are among the numerous benefits precision equipment can bring.



Eligibility

Grassland farms only.

Apparatus must primarily be used for pesticide applications.

When applying for this item, you will be required to submit quotes/invoices to verify the sum applied for.

Applicants must provide evidence that they hold a valid PA qualification and the spraying equipment has been tested.

STEPS039

Precision pesticide application technology for grasslands

Guidance

- You must discuss this option with your Severn Trent Agricultural Advisor before applying
- Apparatus applied for must directly benefit water quality
- Applications must outline the water quality benefit of the apparatus in order to be considered
- If successful in your application, you may be asked for feedback as to how the equipment has impacted on your business e.g. any reductions in product use
- Applicants must already be following best practice when handling and using pesticides
- Application of pesticides must be undertaken by competent and certified operator



Cover crops

How does this help the environment?

Establishing a cover crop during fallow periods reduces nutrient leaching during the autumn/winter and provides soil protection from wind and rain erosion.

How does this help my farm business?

Cover crops are a vital tool in developing healthy soils on the farm. From nitrogen fixing to biofumigation, organic matter build-up, and soil decompaction, cover crops are beneficial in a multitude of ways for both your business and the environment.



STEPS008

Grant value:
See table



Eligibility

STEPS008 is a priority item for nitrates

Please check with your Severn Trent Agricultural Advisor to check eligibility.

The land chosen must be next to a water body or have a known direct influence on a water body in close proximity.

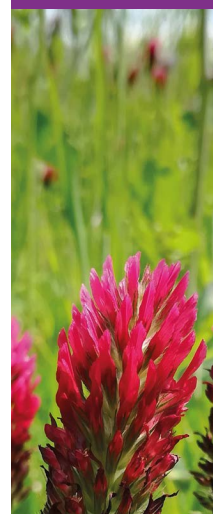
STEPS008 Cover crops

Guidance

- The crop must be established by September 15th, to ensure good ground cover
 - Cover crops sown after maize may be applied for at a rate of £30 per hectare. However, they must be established by October 15th. If considering this option, you should first consult your Agricultural Advisor
 - The selected crop must give good ground cover; maize or miscanthus is not accepted
 - Fertiliser should not be applied to the crop
 - Advice should be sought from your Agricultural Advisor to deem if field is suitable
 - The crop must remain in situ until at least January 15th. In some cases crops may be destroyed earlier e.g. if also being used as a biofumigant. However this should be discussed with your Agricultural Advisor
 - Grazing of cover crops in surface water catchments is permitted but not until after January 31st
 - Ploughing is not permitted, however the use of light cultivation techniques is recommended
 - It is recommended you discuss this option with an agronomist or your Agricultural Advisor
 - Any crop sown created for Ecological Focus Area (EFA, CAP greening criteria) cannot be claimed under STEPS. EFA is a regulatory requirement which cannot be funded by STEPS.
- For guidance to the Basic Payment Scheme, go online and search for: **BPS 2020**. (gov.uk/government/publications/basic-payment-scheme-rules-for-2020).

Undersowing maize

- Cover crops may be sown into a growing maize crop
- Crops should be drilled into a growing crop to give good establishment. Broadcasting of seed will only give poor uptake and cover
- Undersowing maize requires careful crop management and should be discussed with your agricultural advisor if you are considering this option
- Undersowing maize should not be used to bring marginal growing land into production and suitable risk assessments, such as those developed by the Maize Growers Association should be followed appropriately
- Suggested sowing rates for undersown grass are given in the table below, however rates and timings may differ with species and maize varieties.



Crop Type	Grant value
STEPS 008a Cover crops	£60/ha
STEPS 008b Undersowing maize	£60/ha
STEPS 008c Cover crops following maize (not undersown)	£30/ha

Cover crop species	Minimum seed rate Kg/Ha
Mustard	10-15
Oil radish	15-20
Winter turnip rape	10-15
Radish/Phacelia/Oat mix	22-25
Mustard/Oat/Phacelia mix	20-23
Forage Rye/Vetch mix	40-45



STEPS008

Cover crops



Please take into account crop rotations when sowing cover crops. Cover crops can potentially lead to an increase in slug populations depending on weather and soil conditions.

- The location of the area selected must be clearly marked on the map submitted with your STEPS application. The table below gives examples of crops which will be funded through this STEPS measure. This is not an exhaustive list
- It is suggested that farmers sow as early as possible for good establishment and maximum nutrient capture. Direct drilling into cereal stubble is an effective method of planting.

- Therefore, it is acceptable to state the approximate area and location you think you may plant on your application form, and submit by January 31st
- When you know the exact area later in the year, inform your Agricultural Advisor before August 15th who will supply you with a form to mark the area and location
- You must supply maps and photos of crop locations at the time of confirmation.

Note: The total value of the STEPS grant is capped at £5000 including any crops confirmed during summer. Severn Trent Water will be unable to fund the value of crops above £5000.

If you would like to apply for cover crops but don't know the area just yet:

- At the time of submitting your STEPS application, you may not be clear on the area/location of cover crops you will be planting later in the year

Maize Undersowing Mix	Timing of drilling	Rate
Tall Fescue or perennial Ryegrass	Before 4 leaves	7 kg/ha
	4-6 leaves	10 kg/ha
	6-8 leaves	15 kg/ha



Manage overwinter tramlines

STEPS009

Grant value:
£10 per hectare

How does this help the environment?

Tramlines are hotspots for soil compaction and can lead to run-off transporting pollution into watercourses. The use of tines or more specialist equipment to disrupt tramlines and improve water infiltration can help to reduce the risk of run-off occurring.

How does this help my business?

Soil compaction and erosion along tramlines can be a significant problem in some fields. Managing the tramlines over winter can reduce compaction and the negative effects this can have on your soil health. Minimising run-off can help to keep soil, nutrients and pesticides where they are needed – in the field.



Eligibility

This item is available for fields close to, or with known links to watercourses.

STEPS009 Manage overwinter tramlines

Guidance

- This option can be used to help prevent surface flow and sediment movement along compacted tramlines
- A simple tine should be used to disrupt the tramline between October and February. This breaks up the soil compaction and encourages water to infiltrate into the soil
- Specialist equipment designed to disrupt a tramline, such as a Wonderwheel, may also be used
- Land must be adjacent to watercourse or have direct influence on a watercourse
- Applicable to winter cereal land. Not recommended on winter oilseed rape sown land
- Photographic evidence must be taken
- Invoices must be kept if contractors are used or machinery is rented.

Bioreactors

How does this help the environment?

Bioreactors are a new method to reduce the amount of nitrate in field drainage before it outflows into watercourses. Microorganisms break down nitrates in the drainage water, thereby improving water quality.

How does this help my business?

A bioreactor can easily be installed under a field margin or in a field corner, and so does not take any land out of production and requires very little maintenance.

STEPS010

Grant value:
£2000 per unit



Eligibility

Bioreactors cannot be used on historic or archaeological features or areas of existing wildlife interest identified on the Farm Environment Record (FER), the Environmental Information Map, or the Historic Environment Farm Environment Record (HEFER).

STEPS010

Bioreactors



Guidance

- Bioreactors are subsurface chambers which are located to intercept field drains before they enter a watercourse
- Placement and sizing of a bioreactor should be discussed with a professional
- The installation site should be approximately 3.5m in width and 30m in length
- The bioreactor chamber should be lined with an impermeable membrane, with reception/inspection pits at the inlet and outfall
- The bioreactor should be filled with woodchips in the ¼ inch to 1 inch (0.6 to 2.5cm) size range and must not be derived from treated or preserved wood
- Over the course of its lifetime the woodchips in the bioreactor will need to be renewed
- Once filled the bioreactor should be turfed over.

Getting further guidance

There are a number of companies in the UK which offer bioreactors. Further general information can be found through the Nuffield Scholarship below. Go to: **nuffieldinternational.org** and search Nuffield Scholar reports for Land Drainage

Livestock removal from high risk fields

This is a 5 year agreement where you will receive a single payment in year one of the agreement.

How does this help the environment?

Livestock fields in groundwater catchments which are located close to our boreholes, may pose a greater level of risk to water quality.

In special circumstances it may be appropriate to move livestock elsewhere in order to reduce the risk of contamination from bacteria.



STEPS011

Grant value: £500 per hectare

Full payment received in first year
5 year agreement - must maintain for 5 years



Eligibility

STEPS011 is a priority item for cryptosporidium groundwater catchments

Livestock must be removed to a field outside the Severn Trent Water catchment.

Please check with your Severn Trent Agricultural Advisor to check eligibility.

STEPS011 Livestock removal from high risk fields



Guidance

- A high risk field is determined by its topography, soil type and its proximity to a borehole. Your local Agricultural Advisor will determine if this is a suitable option for your farm
- Livestock must be part of the farming enterprise
- Livestock must be removed from field all year round
- Maximum chemical nitrogen usage is 40kg N per year
- No slurry or Farm Yard Manure (FYM) can be applied to the land/field
- Field must not be put into an arable crop
- Grazing cannot take place but the making of hay, haylage and silage is permitted
- The location of the high-risk fields must be clearly marked on the map submitted with your STEPS application. Your Agricultural Advisor will assist in identifying potentially high risk fields. They will be determined on a case by case basis depending on the associated risks.

Low nitrogen input into grassland

How does this help the environment?

This option will reduce nitrate inputs into grassland in highly targeted locations, to help slow or reverse nutrient levels in groundwater catchments which are used for drinking water.

How does this help my business?

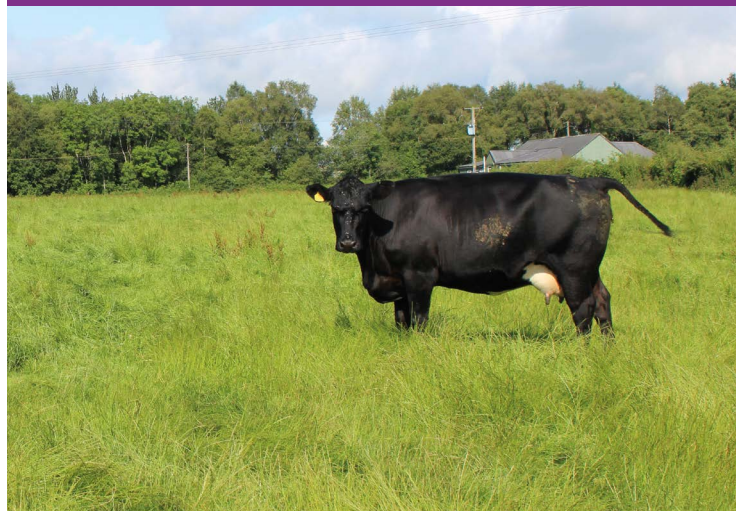
Lower inputs results in lower costs for your farm business. It also aids in disease management of your stock, as lower stock numbers results in reduced host opportunities for parasites.



STEPS012

Grant value: £1200 per hectare

Full payment received in first year
5 year agreement - must maintain
for 5 years



Eligibility

This option is only available in Severn Trent Water borehole sites that are at risk to nitrates

This option is only applicable to improved grassland which currently receives at least 200kg N per ha per year.

Your local Agricultural Advisor will determine if this is a suitable option for your farm.

STEPS012 Low nitrogen input to grassland

Guidance

- This is a 5 year agreement where you will receive a single payment in year 1 of the agreement
- Applicants must submit evidence with their application that demonstrates a recommended fertiliser management system or evidence to support low intensity farming
- This evidence should show that the area currently receives more than 200kg of nitrogen per ha per year. All records of all management activity on the option area for each parcel to be kept on farm
- Exclude all livestock from the land from October 1st to March 15th
- Applicants cannot apply/store farm yard manure in field
- Applicants cannot apply slurry to field
- Maximum chemical nitrogen usage is 40kg N per year
- * Any fields chosen under this item must not be ploughed, cultivated or re-seeded
- * Supplementary feeding spots are not permitted, except for mineral blocks
- Applicants are not allowed to use pesticides or herbicides, except to spot-treat or weed-wipe for the control of injurious weeds and invasive non-native species
- Applicants must hold a monthly record of the number of livestock grazing the land, and this must not exceed more than 0.8 LU per hectare at any given time. Standard livestock units are given in the tables opposite.

Other livestock	Livestock units
Horses	0.80
Breeding female goats	0.16
Other goats	0.11

Cattle	Livestock units
Dairy cows	1.00
Beef cows	0.75
Heifers in calf (rearing)	0.80
Bulls	0.65
Other cattle (under 1 year)	0.34
Other cattle (under 1 year)	0.65
Other cattle (2 years and over)	0.80
Pigs	Livestock units
Boars	0.35
Breeding sows	0.44
Gilts in pig	0.20
Maiden gilts	0.18
Other pigs	0.17
Poultry	Livestock units
Cocks, hens, pullets in lay	0.0017
Pullets, one week to point of lay	0.003
Broilers	0.0017
Other table chicken	0.004
Turkeys	0.005
Ducks, geese, other poultry	0.003
Sheep	Livestock units
Rams	0.08
Lowland ewes	0.11
Upland ewes	0.08
Hill ewes	0.06
Store lambs (under 1 year)	0.04
Breeding ewe hoggs, 6 months to 1 year	0.06
Other sheep (over 1 year)	0.08

Source: (Nix, 2003)

Watercourse fencing

How does this help the environment?

Livestock access to watercourses can cause erosion of riverbanks, resulting in the loss of soil, and contamination of water by nutrients and bacteria. Preventing livestock access to watercourses, and allowing the establishment of a buffer strip adjacent to watercourses reduces contamination and provides an area for wildlife.

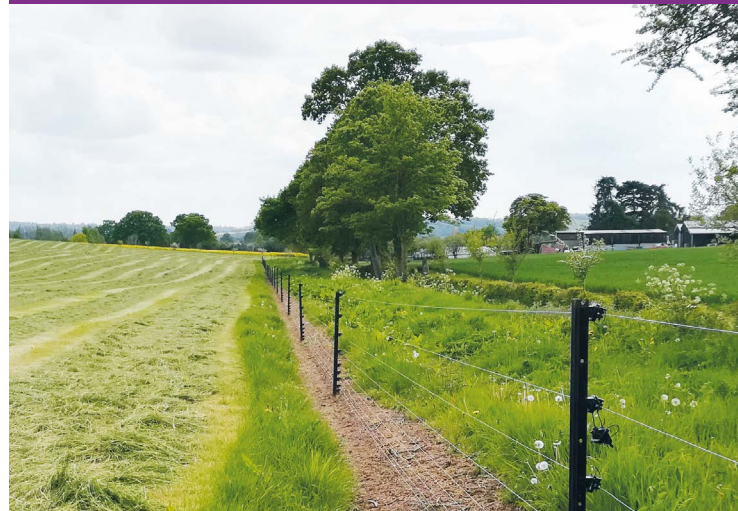
How does this help my farm business?

Installation of robust watercourse fencing can assist with stock management and prevent the loss or injury of animals on hazardous banks. It can reduce livestock exposure to disease risk areas, and improve overall animal welfare.



STEPS013

Grant value:
See over the page



Eligibility

STEPS013 is a priority item for cryptosporidium

Please check with your Severn Trent Agricultural Advisor to check eligibility.

Where fencing is to be erected along dry ditches, these must have a connection to a stream or river.

Existing fencing may only be replaced where it is no longer stockproof (photographic evidence of the fence condition is required).

STEPS013 Watercourse fencing

General requirements

- Fences must be a minimum of 1.5m from the top of the bank of the watercourse
- Fencing should prevent animal movement upstream or downstream
- The fence should be at least 1.05m high and suitably stockproof
- All the materials used should meet the relevant British Standards. [Go online to BSIgroup.com](https://www.bsigroup.com) and search the standards database.
- It is your responsibility to obtain permission from the Environment Agency, Natural England, or your local council, if required, before erecting any fencing
- When erecting a fence, consider installing gates to allow management activities or husbandry operations. Applicants are entitled to apply for a gate (options STEPS013f or STEPS013g) to install with their fencing to comply with Basic Payment Scheme regulations. This option should be discussed with your Agricultural Advisor.

Guidance

Post and wire fencing

- Use softwood timber that is fully peeled, coated with wood preservative and pressure treated, or treated with an approved preservative. Untreated durable timber can be used as set out in the Forestry Commission guide to forest fencing
- Use straining posts that are at least 125mm by 125mm square (or have a 100mm top diameter) and are at least 1.87m long
- Set the straining posts at least 750mm into the ground and no more than 150m apart
- Place a straining post at every change of direction (horizontal or vertical) and at each end of the fence
- Use struts that are 75mm by 75mm square, or have a 65mm top diameter, and 1.87m long
- Set the struts at least 450mm into the ground and mortise them into the straining post
- Use intermediate posts that are 75mm by 75mm square (or have a 65mm top diameter) and 1.75m long
- Intermediate posts must be placed at intervals of no more than 3.5m from the post centres
- Use strands of galvanised 4mm mild plain steel wire or 2.5mm barbed wire, using enough strands to control the livestock.



STEPS013 Fixed costs for fencing types

STEPS codes	Item	Grant amount
STEPS013a	Post & wire fencing	£3/m
STEPS013b	Sheep netting	£3.90/m
STEPS013c	Permanent electric fencing	£2.50/m
STEPS013d	Clipex fencing	£2.50/m
STEPS013e	Temporary electric fencing	£2.00/m
STEPS013f	Gate metal	£140/unit
STEPS013g	Gate wooden	£195/unit



STEPS013

Watercourse fencing

Guidance

Sheep netting



- Use softwood timber that is fully peeled, coated with wood preservative and pressure treated, or treated with an approved preservative. Untreated durable timber can be used as set out in the Forestry Commission guide to forest fencing
- Use straining posts that have a top diameter of at least 125mm, or are 100 by 100mm in cross-section when sawn
- Make sure the straining posts are 1.85m long, if set in concrete, and 2.15m long otherwise
- Place the straining posts no more than 150m apart, if using mild steel line wire, or 300m apart for high tensile wire
- Use a straining post at every change of direction (horizontal or vertical) and at each end of the fence
- Use struts that have a top diameter of at least 80mm, or are 75mm by 75mm when sawn
- Make sure the struts are 1.6m, if set in concrete, and 1.9m long otherwise. Notch struts into the straining post at an angle of no more than 45 degrees
- Use intermediate posts that have a top diameter of at least 65mm, or are 75mm by 75mm when sawn
- Make sure intermediate posts are 1.7m long and space them no further than 3.5m apart.

Permanent electric fencing

- Erect wire fencing at least 1.05m high, using a minimum of 4 mild steel or high tensile plain wires
- Use straining posts with a top diameter of at least 150mm and 2.15m long, spaced according to the type of wire used
- Use struts with a top diameter of at least 80mm and 2.1m long, notched into straining posts
- Use intermediate posts with a top diameter of at least 63mm and 1.7m long, spaced according to the type of wire used
- Install a mains-operated energiser in accordance with the Institute of Electrical Engineers (IEE) Regulations.

Clipex fencing

- Clipex fencing should only be used with sheep.

Temporary electric fencing

- Temporary electric fencing may be installed but only to permit livestock exclusion where the watercourse floods, or when managing stock to prevent overgrazing of fields. Discuss the suitability of this option with your Agricultural Advisor.

STEPS013

Watercourse fencing

Gates (metal and wooden)

- Can only be used where livestock are being excluded from a watercourse
- For wooden gates - construct the gate out of timber in a style that is traditional to the local area OR if there is no local gate style then construct the gate to the specifications shown below
- Hang and clap all styles of gate separately from an adjoining fence line – do not use the hanging post as an end strainer.
- **Either**
set gate posts at least 900mm into the ground and surround with concrete at least 450mm by 450mm wide, and 600mm deep, **or** erect gate posts without concrete surrounds and set at least 1.1m below the ground surface, with the soil compacted around the posts in 150mm layers. Weather cap the top of the gate posts, if wooden
- Wooden wings should be installed, where the gate adjoins a hedge as part of the boundary.
- **Wings must:**
 - Consist of at least 3 wooden rails fixed between 2 posts.
 - Do not fix the rails to the hanging post of the gate.
 - Rails must be at least 38mm by 87mm.
 - Posts must be at least 100mm diameter half round, 1.8m long and sunk 0.7m into the ground.

Gate section sizes		
Section	Gates up to 3m wide	Gates 3m wide and over
Top rail	100mm by 75mm	125mm by 75mm
Top rail tapered to	75mm by 75mm	75mm by 75mm
Under rails	75mm by 25mm	75mm by 25mm
Braces	75mm by 25mm	75mm by 25mm
Hanging style	100mm by 75mm	125mm by 75mm
Shutting style	75mm by 75mm	75mm by 75mm

Livestock drinking troughs

How does this help the environment?

Livestock access to watercourses can cause erosion of riverbanks, resulting in loss of soil and the contamination of water by nutrients and bacteria.

Preventing livestock access to watercourses and providing alternative drinking points allows the establishment of a buffer strip adjacent to the watercourse, which reduces contamination and provides an area for wildlife.

How does this help my business?

Suitable alternative drinking water areas provides livestock with a safer and cleaner space to drink.

STEPS014

Grant value:
50% of trough cost



Eligibility

STEPS014 may be selected in conjunction with **STEPS013** watercourse fencing when excluding livestock from a watercourse used for drinking.

In some cases it may be permissible to apply when re-siting a trough in a poached area away from a watercourse.

Contact your Severn Trent Agricultural Advisor to check eligibility.

Severn Trent Water will pay up to 50% of new trough cost. Invoices must be provided as proof of purchase.

STEPS014 Livestock drinking troughs

Guidance

- The new water trough should not be located on land which is vulnerable to soil erosion, poaching or run-off
 - The new water trough cannot be located within 10m of a watercourse and not within 50m of a borehole or reservoir
 - The trough should be mounted on a suitable durable base to avoid soil poaching (see STEPS018 item Hard base for livestock drinking troughs/pasture pumps for guidance)
- The area around the drinking trough:
- should be excavated to a minimum width of 2.5m
 - should be excavated to a minimum depth of 150mm, or down to a naturally occurring hard surface
 - should have compacted hardcore to a depth of at least 150mm, and on a geotextile liner.
- The trough should be made of one of the following; galvanised steel, concrete, spray-moulded glass reinforced cement (GRC), or polyethylene
 - The trough should be fitted with a ball valve and service box and comply with the Water Supply (Water Fittings) Regulations 1999. [To find out more, go online and search: legislation.gov.uk/ukxi/1999](https://legislation.gov.uk/ukxi/1999)
 - If using a water source other than mains water, the supply of water to a trough may require permission from the Environment Agency, depending on the source of the water. If water is taken from a borehole, well, or watercourse the landowner may require a licence, depending on the quantity abstracted
 - After completion, the trough should be checked on a regular basis to ensure that there is no water leakage and that it is not overflowing.

If you intend to use the public water supply, you must fit a backflow prevention device and comply with the Water Supply (Water Fittings) Regulations 1999. To find out more, go online and search: legislation.gov.uk/ukxi/1999

**For further guidance
and new connections
call 01332 683711**

**or email [water.
regulations@
severntrent.co.uk](mailto:water.regulations@severntrent.co.uk)**

Livestock pasture pumps



How does this help the environment?

Livestock access to watercourses can cause erosion of riverbanks, resulting in loss of soil and contamination of water by nutrients and bacteria. Preventing livestock access to watercourses and providing alternative drinking points allows the establishment of a buffer strip adjacent to the watercourse, which reduces contamination and provides an area for wildlife.

How does this help my business?

Excluding livestock from watercourses may prevent loss or injury of animals on hazardous banks. Suitable alternative drinking water areas provide livestock with a safer and cleaner space to drink.

A pasture pump will provide water for approximately 20 cattle and doesn't require a mains water or energy supply.

STEPS015

Grant value:
£180 per unit



Eligibility

STEPS015 may be selected in conjunction with **STEPS013** watercourse fencing when excluding livestock from a watercourse used for drinking.

Contact your Severn Trent Agricultural Advisor to check eligibility.

The field in which the pump is located must be adjacent to, or in close proximity to, a watercourse which has been fenced off to prevent livestock access.

STEPS015 Livestock pasture pumps

Guidance

- The area chosen for a new pasture pump should not be vulnerable to soil erosion or within 50m of borehole or reservoir
- The pump should be installed on a hard standing to prevent poaching and run-off, you may apply for STEPS018 - Hard base for livestock drinking troughs/pasture pumps to compliment this item
- The excavated area around the pump should extend to a minimum width of 1m by 1m
- Dig the hardstanding area to a depth of at least 150mm, or down to a naturally occurring hard surface
- Compact hardcore on a geotextile liner to a depth of at least 150mm
- The pump should be securely anchored to prevent movement
- The pump must be designed to allow the animal to use its nose to push a lever that pumps water into a small water bowl or reservoir. A metal splash pan should be positioned under the reservoir to catch spillage
- Not all pasture pumps are suitable for all kinds of livestock. Please refer to the pump supplier details to ensure the pump you have selected is suitable for your situation
- Pasture pumps can't be used to replace existing equipment in the same location. The pump can be removed and stored during the winter period but must be available for inspection
- The pasture pump should be checked on a regular basis to ensure that there is no water leakage
- The pump should meet the relevant British Standards. [Go online to BSIgroup.com](https://www.bsigroup.com) and [search the standards database.](#)

If you intend to use the public water supply, you must fit a backflow prevention device and comply with the Water Supply (Water Fittings) Regulations 1999. To find out more, go online and search: legislation.gov.uk/ukxi/1999

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**or email [water.
regulations@
severntrent.co.uk](mailto:water.regulations@severntrent.co.uk)**

Water supply pipe

How does this help the environment?

Livestock access to watercourses can cause erosion of riverbanks, resulting in loss of soil and the contamination of water by nutrients and bacteria. Preventing livestock access to watercourses and providing alternative drinking points allows the establishment of a buffer strip adjacent to the watercourse which reduces contamination and provides an area for wildlife.

How does this help my business?

Excluding livestock from watercourses may prevent loss or injury of animals on hazardous banks. Suitable alternative drinking water areas provides livestock with a safer and cleaner space to drink.

STEPS016

Grant value:
£2 per metre



Eligibility

This option must be selected in conjunction with:

STEPS014 - Livestock drinking troughs

STEPS015 - Livestock pasture pumps

STEPS017 - Water pumps.

or

in other works where livestock are being excluded from a watercourse.

STEPS016 Water supply pipe

Guidance

- Pipework should be made of medium-density blue polyethylene with an external diameter of at least 25mm
- The water supply pipe must be laid underground at a minimum depth of 800mm
- All joints on the water supply pipe must be water tight and made of brass or plastic
- If the pipe crosses farm tracks, lay the pipe on a 75mm bed of sand and then cover it with a further 100mm of sand, before overlaying it with backfill
- The pipe should meet the relevant British Standards. Go online to: [BSIgroup.com](https://www.bsigroup.com) and search the standards database
- Troughs where water supply piping is connected, must be placed in a suitable location to minimise soil poaching and run-off
- Any surface water generated around the trough must not directly enter a watercourse.

If you intend to use the public water supply, you must fit a backflow prevention device and comply with the Water Supply (Water Fittings) Regulations 1999. To find out more, go online and search: legislation.gov.uk/ukxi/1999

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regulations@
severntrent.co.uk](mailto:water.regulations@severntrent.co.uk)**

Water pump

How does this help the environment?

Livestock access to watercourses can cause erosion of riverbanks, resulting in loss of soil and the contamination of water by nutrients and bacteria. Preventing livestock access to watercourses and providing alternative drinking points using solar or ram pumps, allows the establishment of a buffer strip adjacent to the watercourse, which reduces contamination and provides an area for wildlife.

How does this help my business?

Excluding livestock from watercourses may prevent loss or injury of animals on hazardous banks. Suitable alternative drinking water areas provide livestock with a safer and cleaner space to drink. Solar power and ram pumps can help to provide remote drinking points with no need for mains power or water.



STEPS017

Grant value:
£ See table



Eligibility

STEPS017 may be selected in conjunction with **STEPS013** watercourse fencing when excluding livestock from a watercourse used for drinking.

The item should only be used in the field which is being fenced off.

Contact your Severn Trent Agricultural Advisor to check eligibility.

The field in which the pump is installed must be adjacent to, or within proximity of a watercourse, which has been fenced to prevent livestock access.

This item cannot be used under animal housing or a roof structure.

STEPS017 Water pump

Guidance

- For ram pumps, install a suitable water collection facility, sediment tank (if necessary), drive pipe (supplying pump), pump chamber, pump, and delivery pipe
- Set either solar or ram pumps on a firm base made out of a 150mm thick slab of concrete or a 150mm layer of consolidated hardcore
- All the works must meet the relevant British Standards. Go online to: [BSigroup.com](https://www.bsigroup.com) and search the standards database
- The pumping capacity of solar panel and ram pumps may vary with weather and stream flow conditions. It is suggested that additional water storage tanks be provided to ensure sufficient supply is maintained during peak demand
- Check with suppliers that pumps will be able to raise water a sufficient height to the selected watering point
- Where water may need to be moved over longer distances, ram pumps are more suitable and work on water pressure alone
- The water trough and pump should be checked on a regular basis to ensure that there is no water leakage
- Pump systems can be easily moved from trough to trough
- The connecting water trough should not be located on land vulnerable to soil erosion, poaching or run-off, not located within 10m of a water course and cannot be located within 50m of a borehole or reservoir
- The connecting water trough should be mounted on a suitable durable base to avoid soil poaching (see STEPS018 for more guidance).

Pump options		
STEPS code	Item	Fixed grant amount
STEPS017a	Solar panel pump	£450/unit
STEPS017b	Ram pump	£750/unit

If you intend to use the public water supply, you must fit a backflow prevention device and comply with the Water Supply (Water Fittings) Regulations 1999. To find out more, go online and search: legislation.gov.uk/ukxi/1999

For further guidance and new connections call 01332 683711

or email water.regulations@severntrent.co.uk

Hard base for livestock drinking troughs/resurface gateways

How does this help the environment?

Installing hard bases around troughs and resurfacing gateways, aims to reduce poaching, soil erosion and sediment run-off which may contaminate nearby watercourses or groundwater.

How does this help my farm business?

Hard standing for troughs and pumps provides a level and stable base. This reduces the chance of damage from livestock, improves stock movement, and helps to reduce stock lameness.

Resurfacing and strengthening gateways can improve ease of access for stock, machinery and farm workers.

STEPS018

Grant value:
£110 per base



Eligibility

STEPS018 is a priority item for cryptosporidium

Please check with your Severn Trent Agricultural Advisor to check eligibility.

STEPS018a - Hard base for livestock drinking troughs can be selected in conjunction with the items below in:

STEPS014 - Livestock drinking troughs

STEPS015 - Pasture pumps

STEPS017 - Water pumps

Or they can be applied to livestock drinking troughs or feeders already in place which are acting a source of pollution to a watercourse.

STEPS018b - Resurface gateways may be selected where erosion in field gateways is impacting on a nearby watercourse.

This should be discussed with your Severn Trent Agricultural Advisor.

STEPS018 Hard base for livestock drinking troughs/ resurface gateways

Guidance

Hard base for troughs

- The excavated area around the drinking trough should extend to a minimum width of 2.5m, or 1m for a pasture pump
- The soil on site should be excavated to a minimum depth of 150mm or down to a naturally occurring hard surface, the depth of which will vary according to the type of ground
- The excavated area should be overlaid with a geotextile membrane and the hardcore well compacted by rolling to a minimum depth of 150mm
- Edge the hard base with timber boards
- If there is a requirement for a thicker depth of hardcore, successive layers (each 150mm thick) should be applied and be well compacted
- The base should meet relevant British Standards. [Go online to: BSIgroup.com](https://www.bsigroup.com) and [search the standards database](#)
- Hard bases cannot be constructed within 10m of watercourse or ditches and cannot be located within 50m of a borehole or reservoir
- Hard bases cannot be constructed under roofs or livestock handling facilities that are not associated with feeding or drinking
- Bases constructed within SSSIs must adhere to the Natural England SSSI designation documents.

Resurface gateways

- Excavate the full width of the gateway by the full length which the gate opens into the field when it is at 90 degrees
- Excavate to a minimum depth of 150mm or until there is a naturally occurring hard surface
- Remove the excavated soil from the gateway area and spread it on the verges of the field track, allowing for drainage
- Overlay the excavated area with a geotextile membrane, then fill with aggregate (hard core) to a minimum consolidated depth of 150mm
- Works must meet the relevant British Standards. [Go online to: BSIgroup.com](https://www.bsigroup.com) and [search the standards database](#).

STEPS018 Costs for Hard base for livestock drinking troughs/Resurface gateways

STEPS codes	Item	Fixed grant amount
STEPS018a	Hard base for livestock drinking troughs	£110/base
STEPS018b	Resurface gateways	£92/gateway

Installation of piped culverts in ditches

STEPS019

Grant value:
£160 per unit

How does this help the environment?

Installing a watercourse crossing allows the passage of stock and machinery without disturbing the watercourse or banks, reducing erosion and water contamination.

How does this help my business?

Culverting a watercourse allows better access for stock and machinery, and enabling easier movement around the farm, and reducing the risks created when stock move around watercourses.



Eligibility

STEPS019 is a priority item for cryptosporidium

Culverts may not be used to replace an existing structure or where it may damage an environmental, historical or archaeological feature identified on the Farm Environment Record (FER), the Environmental Information Map, or the Historic Environment Farm Environment (HEFER).

Please check with your Severn Trent Agricultural Advisor to check eligibility.

STEPS019 Installation of piped culverts in ditches

Guidance

- The Environment Agency must be consulted prior to any installation ('Land Drainage' consent may be required)
- Culverts are short sections of pipe designed to carry anticipated flows and have a diameter suited to the likely flows, with a minimum diameter of 450mm
- A minimum 4m length is required for culverts which will be crossed by heavy traffic wheeled vehicles. A shorter length is acceptable for livestock paths and bridleways
- Culvert manufacturer specifications and health and safety protocols must be followed. For heavy duty vehicles, manufacturer specifications must be checked
- The pipe gradient should be approximately equal to that of the ditch bed.
- The pipe invert at the upstream end should be slightly below the bottom of the true ditch bed
- Pipes must have a positive joint to preserve alignment
- It may be necessary to take preventative action to reduce the risk of erosion at the downstream end of the culvert. If necessary insert stones or slabs as protection measures on either side of ditch
- Pack a stone-free filling tightly at the sides of the pipe and at least 300mm above it
- Build up the filling in layers up to 150mm thick, making sure it is consolidated before adding the next layer
- Leave the finished backfill surface so it is crowned above the surrounding ground
- An optional overlying concrete pad of at least 150mm thick may be added to stabilise the culvert
- Culverts cannot be applied for if managed under another agri-environmental scheme
- This measure cannot be implemented where a culvert could potentially drain protected and sensitive habitats, such as SSSIs or Sites of Nature Conservation Interest
- Culverts cannot restrict the movement of migratory fish or eels
- Where possible, a culvert should have a 'mammal shelf' installed, to allow the passage of small mammals across the watercourse, thereby minimizing habitat fragmentation.

Roofing of existing manure & livestock holding areas



How does this help the environment?

The risk of pathogens and nutrients entering watercourses increases when manure is spread at inappropriate times. Preventing rain from falling on manure storage heaps can reduce the pressure on dirty water/slurry storage, allowing spreading to commence when conditions are suitable.

How does this help my farm business?

Excluding rainfall from your manure store allows you to be more flexible with your slurry management, by keeping your product stackable, and reducing the potential of creating slurry that requires storage. Roofing livestock holding yards can benefit animal handling and welfare, and reduce dirty surface run-off.



STEPS020

Grant value:
£52 per m²



Eligibility

STEPS020 is a priority item for cryptosporidium

Please check with your Severn Trent Agricultural Advisor to check eligibility.

Structures without a concrete base to enable cleaning are not eligible for funding.

Upgrading of existing livestock handling areas only.

STEPS020

Roofing of existing manure & livestock holding areas



Guidance

- The applicant must stipulate if the option applies to either farm manure storage or livestock handling facilities
- Temporary field heaps are not eligible for funding
- The covering of the site may require planning permission. You should check with your local planning authority and Environment Agency officer
- Works must meet relevant British Standards. [Go online to: BSIgroup.com](https://www.bsigroup.com) and search the standards database.
- Roof must be impermeable to rainwater and water must be directed away from site into a clean water drain
- Any run-off of FYM effluent is deemed as slurry and must be collected via a holding tank which is compliant with SSAFO regulations, [go online and search: gov.uk/guidance/storing-silage-slurry-and-agricultural-fuel-oil](https://www.gov.uk/guidance/storing-silage-slurry-and-agricultural-fuel-oil)
- FYM store cannot also be used to house feed, livestock or machinery during the winter period. If inspection determines that your manure store is being used for feed, livestock or machinery it will be a breach of your agreement
- Livestock handling area cannot also be used as animal housing. If inspection determines that your livestock handling area is used for animal housing, it will be a breach of your agreement
- Your claim will be based on the erected roofed area in m²

Rainwater harvesting (RWH)

STEPS021

Grant value:
£ See table

How does this help the environment?

Rainwater harvesting helps to reduce the quantity of water entering your slurry store, running across fouled yards, or entering your dirty water tank. This reduces pollution and saves holding capacity.

How does this help my business?

Rainwater harvesting can be a valuable way to increase the resilience of your farm to water shortages, fire fighting or simply provide an additional source of water for filling the sprayer.



Eligibility

Please check with your Severn Trent Agricultural Advisor to check eligibility.

Rainwater harvesting should only be constructed on existing buildings, the exception being when roofing over a sprayer washdown area.

STEPS021 Rainwater harvesting (RWH)

Guidance

Location

- Rainwater is collected from roofed sheds which is then filtered. This filtered water is either pumped or gravity fed into a storage tank
- Harvested rainwater can be used for irrigation of specified crops and the washing of farmyards and machinery. Harvested rainwater can be supplied as livestock drinking water but must be subjected to further treatment first (e.g. UV treatment)
- Where mains water supply is used to top up tanks, fittings must comply with the Water Supply (Water Fittings) Regulations 1999. [To find out more, go online and search: legislation.gov.uk/ukxi/1999](https://www.legislation.gov.uk/ukxi/1999)
- The works should meet the relevant British Standards. [Go online to: BSIgroup.com](https://www.bsigroup.com) and [search the standards database](https://www.bsigroup.com)
- Both above ground and below ground storage tanks are available.
- Storage tanks cannot be used for collecting dirty water, effluents and slurries.

Concrete pad for above ground tank

- Tanks must be located on a reinforced concrete pad. If not already available, one may be created using the grant item.

Below ground storage tanks

- You must check with the local planning authority in case planning consent is needed
- Construction of rainwater storage tanks should follow manufacturer's instructions
- Second-hand tanks are not eligible for funds
- Underground tanks should not be installed in ground with a high water table unless further structural work is undertaken to avoid tanks from floating. In such cases you must seek advice from the manufacturer
- Underground storage tanks should be made up of glass-reinforced plastic and pre-cast concrete
- The grant includes the tank, pump, site excavation, a concrete bed, and backfilling with concrete to cover the tank
- Storage tanks cannot be used for collecting dirty water, effluents and/or slurries.

Above ground storage tanks

- You must check with the local planning authority in case planning consent is needed
- Construction of rainwater storage tanks should follow manufacturer's instructions
- Second-hand tanks are not eligible for funds
- Storage tanks should be situated on hard standing concrete



STEPS021 Rainwater harvesting RWH		
STEPS codes	Item	Fixed grant amount
STEPS021a	Underground tank	£350/m ³
STEPS021b	Above ground tank	£60/m ³
STEPS021c	Flush rainwater diverters & filters	£125/unit
STEPS021d	Downpipes & gutters	£12/m
STEPS021e	Concrete pad for above ground tank	£20/m ²
STEPS021f	Pump	£225/unit



Flush rainwater diverters and downpipe filters

- You must check with the local planning authority in case planning consent is needed
- Item diverts and filters potentially contaminated roof water to keep leaves, debris and other contaminants out of water storage tanks
- Contaminated water is diverted from tanks, reducing tank maintenance and protecting pumps.
- You must send dated photographs of the existing site with your application for this item
- Item is only available in conjunction with a rainwater harvesting system.

Pumps

- Above ground rainwater harvesting systems may be gravity fed or require a pump to transfer water. For underground systems the cost of the pump is included in the grant amount.

Replacement of downpipes and gutters

- You must send dated photographs of the existing sheds with your application for this item
- Item is only available in conjunction with rainwater harvesting system or diversion into a clean water drainage system
- Cannot be used on guttering and downpipes on proposed new buildings
- Applicants must write a justification for using the item, explaining why it's necessary and how it meets the eligibility criteria.
- Successful applicants will need to keep the following records and supply them on request:
 - Any consents or permissions connected with the work
 - Receipted invoices or bank statements where a receipted invoice is unavailable
 - Photographs of the completed work.

STEPS021 Rainwater harvesting (RWH)



Constructed farm wetlands

How does this help the environment?

Constructed farm wetlands are intended to receive and treat lightly contaminated water from around farmyards and fields, and are able to trap pollutants before reaching the main watercourse. Wetlands provide habitat for a range of wildlife and can be the hub of biodiversity on your farm.

How does this help my farm business?

Constructed farm wetlands can be used to treat lightly contaminated run-off from the yard. They also form a useful retention area for water on your farm and may help to prevent flooding in downstream areas.

AV Advisory visit required

A specialist water management advisory visit must be conducted in order to access this STEPS item and can be arranged through your Agricultural Advisor.

STEPS022

Grant value:
50% up to the value
of £5000, incl. VAT



Eligibility

STEPS022 is a priority item for cryptosporidium

Please check with your Severn Trent Agricultural Advisor to check eligibility.

Constructed wetlands should not be designed to intentionally capture dirty water, strong effluents, slurries or pesticide washings.

Constructed wetlands cannot be used on historic or archaeological features or areas of existing wildlife interest identified on the Farm Environment Record (FER), the Environmental Information Map, or the Historic Environment Farm Environment Record (HEFER).

Or where it will restrict the movement of migratory fish or eels.

Or without relevant advice or consents from the Environment Agency (EA), local planning authority or flood consenting authority.

STEPS022

Constructed farm wetlands

Guidance

- The size and type of wetland to be constructed will depend on the flow and strength of effluent from the source
- Constructed farm wetlands provide specific solutions for specific circumstances
- Wetlands designed to trap sediment may be of a simpler design that may even be dry through part of the year
- Wetlands can also be built into ditches in some situations
- Work should be carried out in a dry period to avoid unnecessary soil damage
- Excavated topsoil should be spread on top of embankments
- An outflow pipe should be installed at a suitable location 750mm below the top of the embankment to provide a freeboard
- Several small wetlands may be more effective than a single large wetland
- Advice and assistance from the Environment Agency will be required for this item. To find your local Environment Agency office go online and search: gov.uk/government/organisations/environment-agency or you can contact them via email at enquiries@environment-agency.gov.uk, you can also call them on **03708 506506**.

For more information on the specific construction details for a constructed wetland, go online and search the Wildfowl and Wetlands Trust - [wwt.org.uk](https://www.wwt.org.uk)

Additionally the Environment Agency rural SUDS manuals also contains useful information: gov.uk/government/organisations/environment-agency



This option is subject to a 10-year agreement.

This will be highlighted in the agreement if your grant application is successful and you decide to proceed.

In ditch barriers

STEPS024

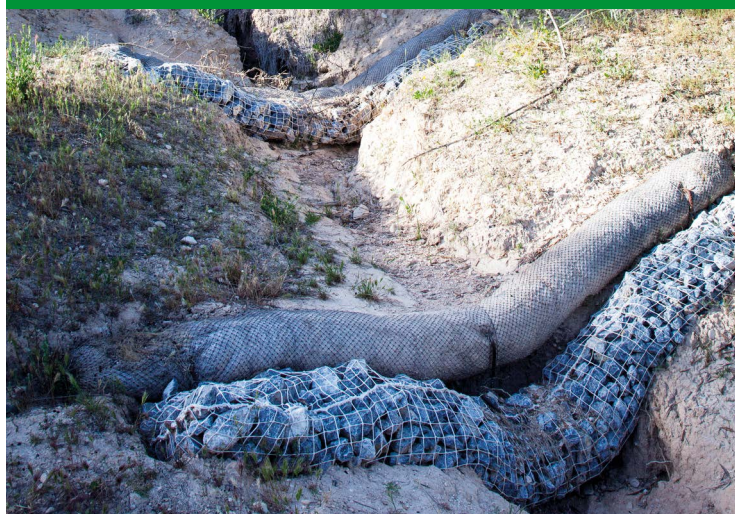
Grant value:
£150 per barrier

How does this help the environment?

In ditch barriers slow down the flow of water in a swale or ditch, and help any sediment to be deposited behind them. Using several of these items in series increases their effectiveness in reducing polluted run-off.

How does this help my business?

Slowing the flow of water in a swale or ditch can improve their effectiveness in controlling water on the farm, and reduce the impact of localised flooding. They provide a collection point for trapped sediment which will help when they need to be cleaned out.



Eligibility

Check dams and seepage barriers can be constructed in swales or in ditches only.

The migratory movement of fish or eels must not be restricted.

Advice and consents from your Internal Drainage Board or Environment Agency must be sought.

Seepage barriers cannot be used on historic or archaeological features or areas of existing wildlife interest identified on the Farm Environment Record (FER), the Environmental Information, Map, or the Historic Environment Farm Environment Record (HEFER).

STEPS024 In ditch barriers

Guidance

Check dams

- Check dams should be located at regular intervals along a swale; the steeper the slope, the shorter the distance should be between each check dam
- Check dams should be constructed of graded broken stone, local soils with a high clay content, or timber
- A trench of 200mm depth should be excavated across the width of a swale
- The dam should then be built up to a height of 500-750mm above the bed of the swale. However, this figure should be taken in conjunction of the actual size of the field trench
- The dam must be built into the sides of the swale to avoid water bypassing the structure. An overflow in the centre of the dam should also be installed
- The dam must be checked and de-silted regularly to prevent it collecting a large amount of silt, which could potentially block the trench
- Depending on the size of field trench, multiple check dams may be necessary (your Agricultural Advisor will be able to advise you on this)
- Build the check dam at the down slope end of the grass swale, leave the upslope end of the trench empty
- Side slopes of the check dam should be at a maximum gradient of 1:2.

Seepage barriers

- In-ditch seepage barriers should be located within man-made field ditches where land on either side is owned by the applicant
- They are best placed where the ditch system carries a fast flow of water during intensive rain events
- The purpose of the barrier is to slow and filter water rather than dam the ditch
- The number of barriers in any one ditch would depend on the gradient, with steep gradients benefiting from more structures
- In ditch barriers must not be constructed on natural watercourses, or where there is a high risk to land or property if the structure was to cause local flooding
- The in-ditch barrier should be no more than 4m wide and 1m high
- Barriers may be constructed from wooden piling or horizontal planks (with gaps), stone filled gabions, willow stakes/woven branches or recycled drainage material
- Wooden slats should be formed either vertically or horizontally (if less than 2m wide) leaving 1-2mm gap between each barrier. The wood must not be treated with a chemical wood preservative product as these are toxic to aquatic life
- Galvanised steel girders may be used as holding posts for the slats. The slats must be of sufficient strength to resist the force of fast flowing water and be durable
- Seepage barriers are likely to require repair over the course of their lifetime
- Trapped silt should be periodically removed. Checking after heavy rain is advisable.

Farmer innovation

How does this help the environment?

No-one knows your farm and land like you do. Your knowledge and insight can often find innovative ideas and ways to tackle the issues of diffuse pollution from your farm.

These ideas if implemented will protect the local waterbodies and bring benefits to the wider environment, but aren't covered by any of the other STEPS options.

Here's your chance to harness a great opportunity for creative thinking and could be something that other farms could adopt in future years.

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Here's your chance to harness a great opportunity for creative thinking and could be something that other farms could adopt in future years.

How does this help my business?

Every farm enterprise is different. If the list of options available in STEPS doesn't suit your farm, or your circumstances or budgets, using this option to suggest an alternative or innovative way to help protect water quality and the environment, in a way that suits the commercial capability of your farm enterprise, can bring business benefits tailored for you.

STEPS025

Grant value:

50% up to the value of £5000, incl. VAT

Eligibility

Farmer innovation items must address the priority water quality issue in your catchment and should be discussed with your Agricultural Advisor before applying.

Your application will be subject to the same scoring system as fixed grant STEPS items.

If the catchment team deem your application to be of benefit to the catchment, we will fund up to 50% of the cost (ex. VAT) with a maximum contribution of £5000.

We cannot fund any infrastructure directly linked to meeting regulatory requirements.

- All farmer innovation applications must be accompanied with quotes or costings for the proposed works/items, maps and timings. Where this includes your own time, an estimate must be provided.
- All supporting information must be submitted at the time of application. Applications without necessary information will not be considered until this is received.
- Specific requirements for the respective categories of farmer innovation are detailed in the following sections.
- The water quality or biodiversity benefit of the work must be explained in the application form. Applications without this will not be considered.



STEPS025 Farmer innovation

The following are not considered innovative options and will not be funded

- Clearing/re-digging of ditches
- Storage of waste effluent or liquor (regulatory requirement)
- Replacement or maintenance of items/ infrastructure
- Machinery and farm activity with no direct improvement of water quality
- Pesticide storage facilities (including shipping containers)
- Applications for improvements in biosecurity
- Items otherwise covered by fixed price grants
- Payment for plant hire for use in installing fixed cost items
- Field drainage
- Items which are offered in our Spring STEPS biodiversity grants.



STEPS codes	Item	Fixed grant amount (inc. VAT)
STEPS025a	Precision farming equipment	50% cost up to £5000
STEPS025b	Clean and dirty water separation	50% cost up to £5000
STEPS025c	Other innovation item	50% cost up to £5000
STEPS025d	Biodiversity	50% cost up to £5000

Farmer innovation precision farming equipment

STEPS025a

Grant value:
Up to £5000

How does this help the environment?

Precision farming equipment can improve the accuracy and efficiency of nutrient and fertiliser usage beyond that possible with standard apparatus. Best practice and responsible pesticide and nutrient management should be used before this option is considered.

How does this help my business?

Introducing precision equipment to your farm can not only save you money through reducing the quantity of products used in the field, but also greatly improve efficiencies across your enterprise. Improved speed of field operations, reduced fuel usage and improvements to crop health are among the numerous benefits precision equipment can bring.



STEPS025a Farmer innovation - precision farming equipment

Guidance

General

- You must discuss this option with your Agricultural Advisor before applying
- Apparatus applied for must directly benefit water quality
- Applications must outline the water quality benefit of the apparatus in order to be considered
- A range of precision equipment or tools may be considered for funding
- All applications are subject to scoring. Funding of an item in a single STEPS funding period does not guarantee funding in subsequent years
- If successful, the STEPS grant may contribute 50% of the cost of the item up to £5000
- If successful in your application, you may be asked for feedback as to how the equipment has impacted on your business e.g. any reductions in product use
- Applicants must already be following best practice when handling and using pesticides

- Precision equipment is subject to a 10 year agreement. You may switch to another piece of equipment before the agreement terminates providing it is an upgrade. The new item will then be covered by the terms of the grant for the remainder of the agreement.

Pesticide application equipment

- If successful in applying for an item, further applications to fund another example of that item in subsequent years will not be considered e.g. applications to fit GPS to multiple machines
- GPS software upgrades may also be considered
- Additions to upgrade existing equipment may be considered
- Applications demonstrating that enhanced pesticide handling/management are already in practice on the farm e.g. use of dedicated washdown pads and biofilters, may be viewed more favourably.

Nutrient management equipment

- Fertiliser application equipment will only be considered in catchments where nutrients area a priority. Discuss this with your Agricultural Advisor.

Evidence

Applicants for pesticide application equipment must supply:

- A map of the land on which the equipment will be used, together with the total area and typical cropping. If contract spraying on another's land, this should also be included
- Proof of PA certification
- Proof of sprayer MOT
- Applicants for nutrient management equipment:
 - Evidence of spreader/sprayer calibration
 - Evidence of a nutrient management plan.



This option is subject to a 10-year agreement.

This will be highlighted in the agreement if your grant application is successful and you decide to proceed.

Farmer innovation clean and dirty water separation

How does this help the environment?

To prevent the mixing of clean and dirty water or improvement of livestock/yard areas/ access ways.



STEPS025b

Grant value:
50% up to the value
of £5000, incl. VAT



Eligibility

Clean and dirty water separation is only available where the works will address the priority issue in the catchment.

You should discuss this option with your Agricultural Advisor before applying.

This option may not be used to resurface manure, silage or slurry stores, areas housing livestock, or on environmental, historic or archaeological features identified on the Farm Environment Record (FER), the Environmental Information Map, or the Historic Environment Farm Environment Record (HEFER).

Grants cannot be used to collect and store effluent or dirty water otherwise controlled by SSAFO regulations.

Works must address areas of your farm that are impacting on a watercourse or contributing to excessive wastewater entering a dirty water tank.

AV Advisory visit required

If using this STEPS option to apply for concreting of yard areas, a Farm Infrastructure Audit is required and can be arranged through your Agricultural Advisor.

STEPS025b Farmer innovation - clean and dirty water separation

Guidance

General

- Proposals to concrete yard areas must be supplied with the area to be covered in m² and a quote from your concrete supplier. If doing the work yourself, approximate costings are permitted
- Concreting must conform to relevant British Standards.
Go online to: [BSIgroup.com](https://www.bsigroup.com) and search the standards database
- All items under this option must be accompanied with a drainage plan indicating the separation of clean and dirty water and where this will be stored/diverted to
- As a minimum concrete must be a minimum of 150mm thick on compacted and blinded hardcore that is at least 150mm thick
- Concrete should have a reinforced base to minimise cracking and distribute the loads exerted by livestock or farm vehicles
- All joints should be treated with a sealant.

Examples of where this grant may be used

- Cross drains on access/livestock tracks
- Improvements to hard standings to enable cleaning of livestock yard areas.



This option is subject to a 10-year agreement.

This will be highlighted in the agreement if your grant application is successful and you decide to proceed.

Farmer innovation other innovation items

STEPS025c

Grant value:
50% up to the value
of £5000, incl. VAT

How does this help the environment?

This option helps any farm enterprise to improve habitats that will help to provide us with food to eat (through sustaining pollination) and helps to clean the water we drink (such as wetland filtration), and helps provide the oxygen we breathe. Improved habitats also bring wider benefits for wildlife. All of this can provide environmental, social and economic benefits too.

Biodiversity is all about protecting and enhancing the amazing variety of life on Earth.

How does this help my business?

Every farm enterprise is different. If the list of options available in STEPS doesn't suit your farm, or your circumstances or budgets, using this option to suggest an alternative or innovative way to help protect water quality and the environment, in a way that suits the commercial capability of your farm enterprise, can bring business benefits tailored for you.




Eligibility

The works must address the priority issue in the catchment.

You should discuss this option with your Agricultural Advisor before applying

This option may not be used on environmental, historic or archaeological features identified on the Farm Environment Record (FER), the Environmental Information Map, or the Historic Environment Farm Environment Record (HEFER).



STEPS025c Farmer innovation – other innovation items

Guidance

General

- To access this grant item you should first discuss your plans with your Agricultural Advisor who will be best placed to recommend a course of action
- Ideas involving on farm water management may require specialist advice and/or consultation with the Environment Agency
- There must be a direct water quality benefit from the work you propose
- The benefits of your idea to water quality must be sufficiently explained in your application
- Applications must include costings/quotes for proposed work.

Examples

- Equipment to allow dry cleaning of livestock yards
- Low ground pressure tyres
- Nitrate inhibitors.



Useful resources and help

In addition to the Severn Trent requirements for each STEPS option, you should also be aware that all works undertaken must conform to UK legislation and you should consult the relevant authority or guidelines to check you comply. Some things to consider are detailed over the page along with additional resources.

Dedicated support and advice

To help you get the best out of what's on offer, our local Agricultural Advisors are available to help you.

All of our team have an agricultural background, most have agricultural degrees, are BASIS qualified, and some have FACTS qualifications. Some of the team are also farmers, with farms located in our region.

stwater.co.uk/steps

Useful resources and help

For capital items

Each capital item must have a minimum design life of at least 5 years.

If it is covered by The Water Resources (Control of Pollution) (Silage, Slurry, and Agricultural Fuel Oil) (England) Regulations 2010 (as amended 2013) (SSAFO) it must have a design life of at least 20 years.

You can check the requirements at:

gov.uk/guidance/storing-silage-slurry-and-agricultural-fuel-oil

Works should also comply with Nitrate Vulnerable Zone requirements:

gov.uk/guidance/nutrient-management-nitrate-vulnerable-zones

All work must comply with all relevant health and safety legislation and British Standards (BS) or equivalent. Check the online database for further information go to:

BSigroup.com and search the standards database.

If you intend to use the public water supply to perform any agricultural activity such as filling troughs or topping up rainwater harvesting tanks, you must fit a non-return valve and comply with the Water Supply (Water Fittings) Regulations 1999. legislation.gov.uk/ukxi/1999/1148/contents/made

Planning permission may be required depending on the capital item chosen. Consult your local planning authority or National Park authority to seek informal advice.

Where land is located within an Area of Outstanding Natural Beauty, AONB officers may need to be consulted on the location of proposed capital items and the materials to be used.

For water management structures on the farm, advice and/or consents must be obtained from the Environment Agency at:

enquiries@environment-agency.gov.uk or Telephone **03708 506506**.

You should also consult your local Internal Drainage Board.

For guidance on the construction of swales, wetlands and water management structures, the Environment Agency has produced a Rural Sustainable Drainage handbook:

gov.uk/government/uploads/system/uploads/attachment_data/file/291508/scho0612buwh-e-e.pdf

For in-field works or groundwork

Work must be undertaken and installed in accordance with:

- Protecting our Water, Soil and Air: A Code of Good Agricultural Practice for farmers, growers and land managers (CoGAP)
- Groundwater Protection Code: Use and disposal of sheep dip compounds; and any higher standards that apply
- Any crop sown created for Ecological Focus Area (EFA, CAP greening criteria) cannot be claimed under STEPS. EFA is a regulatory requirement which cannot be funded by STEPS. [For guidance to the Basic Payment Scheme, go online and search for BPS 2019. \(gov.uk/guidance/bps-2019\).](#)

Work carried out near the top of a river bank may require flood defence consent. Depending on the size of watercourse you should consult the Environment Agency Telephone **03708 506506** or email enquiries@environment-agency.gov.uk

Applicants must also consider the work's impact on the landscape.

If your work affects any of the following you will need consent from Natural England or from the relevant authority:

- **Natural Environment:**
 - Protected Species, such as Great Crested Newt and Bats species
 - National Nature Reserve (NNR)
 - Local Nature Reserves
 - Protected sites e.g. Site of Special Scientific Interest (SSSI), N2K.
- **Historic environment:**
 - Listed Building
 - Scheduled Monument
 - Registered Battlefield
 - Registered Parkland
 - Registered Battlefields.

The Water Supply (Water Fittings) Regulations 1999

For all options relating to the above regulations (Options STEPS014), we strongly advise that all applicants make themselves familiar with the regulations and adhere to them. Especially where any supply of water is using the public water supply. Failure to do so can lead to legal action being taken. For more information please refer to The Regulations and their Schedules (SI 1999 No. 1148 and No. 1506) are available from HMSO you can find these online: defra.gov.uk/environment/water/industry/wsregs99

For pesticide handling and washdown facilities

You should notify the Environment Agency of your intentions by calling them on **03708 506506** or email enquiries@environment-agency.gov.uk

You should check whether your intended construction location is located in a groundwater source protection zone 1 or 2, as if this is the case it is unlikely you will be able to construct pesticide washdown facilities.

Biobeds/biofilters require an Environment Agency T32 waste exemption to legally treat dilute pesticide washings. These are simple to obtain and may be applied for free online.

Go online to gov.uk and search for **guidance/waste-exemption-t32-treatment-of-waste-in-a-biobed-or-biofilter**

When a biobed/biofilter has come the end of its life, the biomix inside can be composted for a year and then spread to land. To do this you also need a U10 exemption from the environment agency, again these are free and available to apply for online.

Go online to gov.uk and search for **guidance/waste-exemption-u10-spreading-waste-to-benefit-agricultural-land**

Further design advice is also available on how to size the loading and washdown area and holding tanks, and on pesticide washing volume calculations, from Catchment Sensitive Farming

Go online to gov.uk and search for **guidance/catchment-sensitive-farming-reduce-agricultural-water-pollution**

The Voluntary initiative has also produced a complete guidance manual on all aspects of washdown area and biobed construction, including which is the best option to suit your farm needs.

Go to voluntaryinitiative.org.uk/en/water/biobeds.

WONDERFUL ON TAP

