Severn Trent Environmental Protection Scheme

Spring 2020

Limited offer APPLICATIONS CLOSE 22nd JUNE STEPS - Options list

WONDERFUL ON TAP



Severn Trent Environmental Protection Scheme

Options list - Spring 2020

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Are priority items for surface waters

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Are biodiversity items





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 farm.

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

STEPS021 - Rainwater harvesting (only on roofed over washdown area).

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

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.

AV

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 below and detailed specifications for each of the components can be found on pages 7-18.

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 5th (i.e. in the following financial year).

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.



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.



Eligibility

STEPS001 is a priority item for pesticides and in this Spring STEPS round is only available in STW pesticide priority catchments. 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. This is a priority item for pesticides.

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.

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
- 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:

- 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 and 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 at least 100 mm high and 300mm wide, so that it can contain 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
- 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
- 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

you decide to proceed.

application is successful and



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 and in this Spring STEPS round is only available in STW pesticide priority catchments. 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

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.

AV

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.
- Example of a bunded pesticide

sprayer handling area. Image used with kind permission from

D and H Group, danhgroup.co.uk

- 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.



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.

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.



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



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 and in this Spring STEPS round is only available in STW pesticide priority catchments. 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.

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** 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:

- Insert a drain through the liner to create a 100mm bonded outlet at the lowest point of excavation.
- Or alternatively:
- 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.



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.



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 pesticid 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 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

') 1	•	The Environment Agency should be contacted regarding site specific advice and regulatory matters on their customer enquiries line: 03708 506 506.
e	•	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 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.
in		For spreading exemptions, go online and search: gov.uk/guidance/waste- exemption-u10-spreading-waste-to- benefit-agricultural-land

or

gov.uk/guidance/wasteexemption-u11spreading-wastetobenefit-nonagricultural-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.



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

Eligibility

STEPS004 is a priority item for pesticides and in this Spring STEPS round is only available in STW pesticide priority catchments. 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

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. • Further design advice is available on how to 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.
- 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 506 506.
 - 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-wastein-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-exemptionu10-spreading-waste-to-benefitagricultural-land or gov.uk/guidance/wasteexemption-u11spreading-wastetobenefit-nonagricultural-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.
- 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-farmingreduceagricultural-water-pollution or go to the biobed manual at voluntaryinitiative.org.uk/ en/water/biobeds

STEPS004 Fixed costs for biofilters		
STEPS codes	Item	Fixed grant amount
STEPS004a	DIY biofilter	£950/unit
STEPS004b	Ready made biofilter	£1200/unit



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 peatfree compost, 1 part topsoil and 2 parts straw (wheat or barley) by volume.
- Allow the biomix to compost for 30 to 90 davs 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.



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.





- 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** 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.



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-forfarmers-and-land-managers-toprevent-water-pollution

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

STEPS005

Grant value: £250/ha per year (£1250/ha for a 5 year agreement)





Eligibility

STEPS005 is a priority item for pesticides and nitrates and in this Spring STEPS round is only available in STW pesticide and nitrate priority catchments. 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 must not be used as access ways for machinery or stock
- Fertiliser may be used for crop establishment only

- The margin may be topped annually 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-schemerules-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

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.



STEPS006 Grant value: See over the page



Eligibility

Grass fields only.

STEPS006 is a priority item for pesticides and nitrates, and in this Spring STEPS round is only available in STW pesticide and nitrate priority catchments. Please check with your Severn Trent Agricultural Advisor to check eligibility.

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.



Alternative weed management in grassland fields

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 nonchemical weed control into your business as part of Integrated Pest Management (IPM) may help reduce costs overall and allow flexibility in when weeds can be treated.

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

STEPS038 Grant value: £ Bespoke/5yrs



Eligibility

STEPS038 is a priority item for pesticides and in this Spring STEPS round is only available in STW pesticide priority catchments. 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.

IMORTANT: 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

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.

STEPS039 Grant value: 50% up to £5000



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.

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: £60 /ha per year (this is an annual payment)



Eligibility

STEPS008 is a priority item for nitrate and in this Spring STEPS round is only available in STW nitrate priority catchments. 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.
- Under-sowing or sowing grass crops is not permitted except where following early harvested maize, in order to establish overwinter ground cover.
- 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 from the date of sowing until the following January 31st.
- 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-schemerules-for-2020)

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.

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.
- 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. STW will be unable to fund the value of crops above £5000.

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



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 cryptoporidium and in this Spring STEPS round is only available in STW cryptosporidium priority catchments. Please check with your Severn Trent Agricultural Advisor to check eligibility.

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

Existing fencing may only be replaced where it is no longer stockproof.

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 and search the standards database.
- It is your responsibility to obtain permission from the Environment Agency, Natural England, or you 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



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.
 Clipex fencing should only be used with sheep.
- 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.
 Make sure the struts are 1.6m, if set stock to prevent overgrazing of fields. Discuss the suitability of this option with your Agricultural Advisor.
- 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.



STEPS013 Watercourse fencing

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

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

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	100.mm 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 is only available in Spring STEPS in cryptosporidium priority catchments and when applied for in conjunction with STEPS 013 watercourse fencing.

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

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/ uksi/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.



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.

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/uksi/1999**

For further guidance and new connections call 01332 683711

or email water. regulations@ severntrent.co.uk

STEPS015 Grant value: £180 per unit



Eligibility

STEPS015 is only available in Spring STEPS in cryptosporidium priority catchments and when applied for in conjunction with STEPS 013 watercourse fencing.

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 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** and search the standards database.



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.

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/uksi/1999**

For further guidance and new connections call 01332 683711

or email water. regulations@ severntrent.co.uk

STEPS017 Grant value: £ See options over the page



Eligibility

STEPS017 is only available in Spring STEPS in cryptosporidium priority catchments and when applied for in conjunction with STEPS 013 watercourse fencing.

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 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).



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.

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/uksi/1999**

For further guidance and new connections call 01332 683711

or email water. regulations@ severntrent.co.uk

STEPS018 Grant value: £110 per base



Eligibility

STEPS018 is a priority item for cryptosporidium and in this Spring STEPS round is only available in STW cryptosporidium priority catchments. 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** 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** and search the standards database.



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 farmyard manure storage heaps can reduce the volume of storage required, and therefore reduce the likelihood of spreading at inappropriate times.

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.

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



STEPS020 Grant value: £52 per m²



Eligibility

STEPS020 is a priority item for cryptosporidium and in this Spring STEPS round is only available in STW cryptosporidium priority catchments. Please check with your Severn Trent Agricultural Advisor to check eligibility. Structures without a concrete base to enable cleaning are not eligible for funding.

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

> > Existing 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** 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-slurryand-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 based on the erected roofed area in m².



Rainwater harvesting (RWH)

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, firefighting or simply provide an additional source of water for filling the sprayer.

STEPS021 Grant value: £ See list over the page



Eligibility

In this Spring STEPS, STEPS021 is only available in STW pesticide priority catchments when applied for in conjunction with STEPS 002 Roofing for pesticide washdown area. 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/uksi/1999
- The works should meet the relevant British Standards. Go online to: **BSIgroup.com** and search the standards database.
- Both above ground and below ground storage tanks are available. The grant offered takes the following into account:
- Installing the tank and pump
- Site excavation
- Creating a reinforced base for the tank
- Installing connecting pipe-work.

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.
- Storage tanks cannot be used for collecting dirty water, effluents and slurries.

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.



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.

STEPS021 Rainwater harvesting RWH		
STEPS codes	Item	Fixed grant amount
STEPS021a	Underground tank	£350/m3
STEPS021b	Aboveground tank	£110/m3
STEPS021c	Flush rainwater diverters & filters	£125/unit
STEPS021d	Downpipes & gutters	£12/m

STEPS021 Rainwater harvesting (RWH)

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.



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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, including VAT



Eligibility

STEPS022 is a priority item for cryptosporidium and in this Spring STEPS round is only available in STW cryptosporidium priority catchments. 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 mailto:enquiries@environment-agency.gov.uk enquiries@environment-agency.gov.uk, you can also call them on 03708 506 506.

For more information on the specific construction details for a constructed wetland, go online and search the Wildfowl and Wetlands Trust - **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.



Farmer innovation Biodiversity

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), 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 farm 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.



Biodiversity monitoring service

We are offering a monitoring service to measure the biodiversity improvements created by this item. Speak to your Agricultural Advisor if you're interested in this.

STEPS025d

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



We reserve the right to offer a longer agreement, depending on the application.

Eligibility

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

The applicant must ensure that the item is not located on a site that will damage existing habitats (see **Magic.gov.uk**), archaeology or infrastructure.

We may specify that you require a Specialist On Farm Advice (SOFA) visit to support your application. This will be organised by your Severn Trent Agricultural Advisor.

STEPS025d Farmer innovation Biodiversity



Guidance

Evidence

Please ensure that the following records are retained and can be provided with the claim:

- Invoices (if applicable)
- Maps showing location of item(s)
- Photos showing location and condition of established item(s). Depending on the application, we may require photos on an annual basis.

Examples of previous successful applications include:

Pond management

Long term habitat creation

Invasive species control

Hedge laying.



Annual pollinator mix

How does this help my environment?

This option provides areas of flowering plants to boost essential food sources for beneficial pollinators as well as invertebrates that will help to feed farmland bird chicks in the summer. Once considered weeds, some cornfield annuals are now among the rarest flowers in the UK and uncommon to see in the farmed landscape.

How does this help my farm business?

Flower mixes can attract and support natural predators of crop pests, potentially reducing the farms reliance on insecticides. These areas also support native pollinators, essential for oilseed rape and beans. This option could also be seen as a wildlife friendly annual fallow and green manure, with the soil health and rotational benefits they bring.

Brightly coloured, an annual pollinator mixture can look great on your farm. Consider planting where it would be visible to the public.

Biodiversity monitoring service We are offering a monitoring service to measure

the biodiversity improvements created by this item. Speak to your Agricultural Advisor if you're interested in this.





Grant value: Total £2500/ha £500/ha per year (claimed annually for 5 years).

STEPS026



Eligibility

The option must be re-established each year. It can be kept in the same location if working well, or moved around the farm, but the same area must be retained.

Only available on cultivated land.

Mixture diversity must be maintained.

Do not use where evidence or records exist for important arable plants or adjacent to Sites of Special Scientific Interest (see Magic.gov.uk).

> Speak to your Severn Trent Agricultural Advisor about eligibility.

STEPS026 Annual pollinator mix



Guidance

- Establish a mix containing at least 4 of the following; Crimson Clover, Red Clover, Berseem Clover, Persian Clover, Phacelia, Native Corn Flower, Native Corn Marigold and Native Corn Chamomile, Borage, Common Vetch, Field Poppy. The seed mix chosen should be discussed with your Severn Trent Agricultural Advisor.
- The type of mix can be established on all soil types and in most locations but it works best in south or south-southwest areas with a sunny aspect. Some cornfield annuals are best suited to medium and light soils. Check with your seed merchant for the best mix for your soil type and situation.
- Establish as early as possible after harvest considering topography and soil type, following the guidance of your agronomist and chosen seed merchant.
- Retain the mix until 1st September the following year .
- Plots should be at least 6m wide. Many pollinator species have a limited foraging range, so spreading smaller areas of this habitat around the farm will have significant benefits.
- You should not drive on the annual pollinator mix area, but limited turning is allowed if sward damage is prevented.
- Do not use pesticides or fertilisers. Herbicides are only permitted to spot treat or weed wipe injurious weeds, invasive non-native species, Stinging Nettles and bracken.
- Speak to your local Severn Trent Agricultural Advisor for further advice.

Evidence

Ensure that the following records are retained and can be provided with the annual claim:

- Invoices for seed mix used
- Maps showing locations and areas of annual pollinator mix
- Photos showing locations and conditions of established areas. Photos of the annual pollinator mix in flower are particularly valuable evidence that the option is working well. These should be taken annually and sent to your Severn Trent Agricultural Advisor.



Arthropod banks How does this help the environment?

This option provides raised grass areas which mimic the dense, tussocky grass cover of traditional hedgerows, providing a habitat for invertebrates and farmland birds to forage and nest in. Small mammals, bumblebees, spiders, insects and farmland birds which prefer to nest in open areas can be found on successful arthropod banks.

How does this help my farm business?

Beneficial predatory and pollinating insects overwinter in dense grass cover and will move in to the crop in spring. They then act as natural predators of crop pests, and pollinate the crop itself. As many of these beneficial species do not travel more than 250m, arthropod banks located in the middle of a field can be a valuable resource to control crop pests. Over time there can be an economic benefit from the reduction in insecticides used on the crop. Arthropod banks can also help to slow surface water flow, reducing the risk of water pollution from pesticides, and can help prevent soil erosion.



Biodiversity monitoring service

We are offering a monitoring service to measure the biodiversity improvements created by this item. Speak to your Agricultural Advisor if you're interested in this.



STEPS027

Grant value: £2500/ha

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

Contraction of the second seco

Eligibility

Cultivated land or temporary grassland only.

Suitable for larger fields (20 ha and above) or in areas where soil erosion is a risk.

Can be located in the centre of fields or near the edges.

The applicant must ensure that the arthropod bank is not located on a site that will damage existing habitats (see **Magic.gov.uk)**, archaeology or infrastructure.

Arthropod banks must remain in place for a minimum of 5 years.

STEPS027 Arthropod Banks

Commercial Cereal pests	Natural predators that benefit from banks
Aphids	Green and brown lacewings, lady beetles, hover flies, midges, and soldier beetles
Leatherjackets, frit fly, gout fly	Parasitoid wasps, carabids and farmland birds
Bean seed flies	Spiders, parasitoid wasps, rove beetles

Guidance

- Create or maintain an earth ridge, this should be free-draining. It needs to measure between 2m to 5m wide and about 0.4m high.
- Leave gaps at each end of the ridge to allow access for machinery.
- Establish or maintain a native grass mixture in year 1 of the agreement, with suggested species including fine leaved grasses and tussock-forming varieties such as Fescues, Cock's-foot and Timothy.
- Cut the established mixture several times as required in the first summer to control woody growth and annual weeds. In years 2-5, cut after 31st August to protect nesting birds and invertebrates; cut when the bank is dry but before insects look to find shelter over winter.



- Do not spray with pesticides or fertilisers. Herbicides are permitted for spot treatment or wipe injurious weeds like stinging nettle or bracken, or invasive non-native species.
- You should avoid application of insecticides within at least 6 meters of the bank as these will be particularly harmful to the beneficial predatory i nsects you are trying to encourage.
- Speak to your local Severn Trent Agricultural Advisor for further advice.

Evidence

Ensure that the following records are retained and can be provided with the claim:

- Invoices for seed mix used (if applicable)
- Maps showing location of banks
- Photos showing location and condition of established banks. Photos of the arthropod bank in flower are particularly valuable evidence that the option is working well. These should be taken annually and sent to your Severn Trent Agricultural Advisor.



Feeding farmland birds

How does this help the environment?

This option is a quick and easy method to provide food for seedeating farmland birds during the "hungry gap" (late winter months and early spring) before natural food resources become available.

How does this help my farm business?

A diverse farmland bird population is a sign of a healthy farmed environment. Look out for target seed-eating farmland birds such as; Linnet, Corn Bunting, Grey Partridge, Yellowhammer and Tree Sparrow, using the feeding sites – they'll find them quickly!



Biodiversity monitoring service

We are offering a monitoring service to measure the biodiversity improvements created by this item. Speak to your Agricultural Advisor if you're interested in this.

STEPS028



Grant value: £3250/tonne

£650/tonne received as 5 annual payments. 5 year agreement - must maintain the same area for 5 years.

Eligibility

Up to 3 tonnes per year per farm can be applied for.

This option is not designed to feed game birds, such as Pheasants and Red-Legged Partridge. Whilst these can undoubtedly benefit, the aim is to feed smaller farmland birds.

STEPS028 Feeding farmland birds

Guidance

- Spread the supplementary feed mixture on the ground twice per week between 1st December and 30th April. Use at least two separate locations. For example, 50kg per week (bi-weekly application) x 20 weeks = 1 tonne.
- Spreading feed when it is raining or very wet can increase wastage hugely. Similarly when conditions are really cold and tough there is a need to increase feeding regularity and amount.
- Select feeding areas that are firm and free-draining, e.g. farm tracks or hard standing and preferably in close proximity to existing favourable habitat (e.g. hedgerows, game covers/winter bird food plots, woodland). Ensure that access to these sites does not cause undue soil damage.
- The mix should comprise a maximum of 70% cereal (Wheat, Barley, Triticale) plus 4 of White millet, Red millet, Linseed, Oilseed rape, Canary seed, Niger seed or Sunflower hearts.
- Ground based feeders are not permitted. Specialist farmland bird feeders are permitted, but the majority of seed must be spread.
- Tailings should not be used as supplementary feed.
- To ensure that clean and healthy feeding areas are maintained, you should move feeding sites regularly when necessary, and avoid close proximity to farm buildings or wet ditches where rats might be an issue. Farm tracks and drier areas work better and cause fewer problems.
- If registered as organic, the feeding mix should comply with organic standards.
- Agreement holders should take part in the 'Big Farmland Bird Count' annually (see bfbc.org.uk/).

Evidence

Ensure that the following records are retained and can be provided with the annual claim:

- Details of mixture used
- Invoice for components of the mixture bought in and records of own seed used
- Dates of feeding (consider keeping a diary of feeding)
- Amount of feed
- Mapped location of feeding areas
- Photographic evidence of supplementary feeding in progress on farm and mixture used
- A copy of the 'Big Farmland Bird Count' results (see bfbc.org.uk/).





Diverse herb rich swards, with a mixture of grasses, herbs and legumes, provides habitat and food for pollinators and other invertebrates, which in turn provide food for farmland birds and mammals. Herbal leys can be highly beneficial to soil health, increasing biological activity and organic matter content. Improved water permeability through the action of the deep rooting plants can reduce surface runoff.

How does this help my farm business?

As part of a sustainable and diverse rotation herbal leys can provide multiple benefits to the farm. They provide valuable protein and mineral rich fodder for livestock, nitrogen-fixing legumes enhance soil fertility and deep rooting plants improve soil structure and organic matter content. They can greatly increase the resilience of the soil, such that it is better able to hold moisture in a dry period, cope with heavy rains without leading to surface runoff and allow a wider window for field work. Certain herbs can have an anthelmintic effect. possibly reducing the reliance on key active ingredients in livestock drenches.



Biodiversity monitoring service

We are offering a monitoring service to measure the biodiversity improvements created by this item. Speak to your Agricultural Advisor if you're interested in this.





STEPS029

Grant value: £1500/ha.

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



Eligibility

The total area must be retained for the duration of the 5 year agreement, the option can be moved around the farm (and best for the farms rotation if it does), but the same area must be retained. If the option is moved new maps of the location will be required by your local Severn Trent Agricultural Advisor.

This option should be only be used on temporary grassland or cultivated land. It is not an appropriate option for permanent pasture.

Do not use where evidence or records exist for important arable plants, or adjacent to Sites of Special Scientific Interest (see Magic.gov.uk).

No minimum or maximum areas are given for this option - this will be reviewed annually at time of scoring applications.

Speak to your Severn Trent Agricultural Advisor about eligibility.

STEPS029 Diverse herbal leys

Guidance

- Establish a mix of at least 5 grasses, 3 legumes (include Bird's-Foot Trefoil) and 5 herbs and wildflowers in the first year of the agreement. Please consult your agronomist and/or chosen seed merchant for advice on establishment of this option. The sward should aim to achieve a 10% cover of Red Clover and an additional 10% cover of other legumes, herbs or wildflowers.
- The sward can be managed by cutting and/or grazing. This option is providing greatest biodiversity value when it is allowed to flower and management will need to allow this.
- The herbal ley should be allowed to flower and sward diversity must be maintained.
- Mob or rotational grazing work well, set stocking is not allowed. If the herbal ley is for hay or silage it must not be cut until the majority of Red Clover has flowered and try to ensure that the whole area is not cut all at the same time. Consider leaving some areas uncut.



- Livestock can preferentially graze species such as Red Clover and Chicory, which will decline if their crown is grazed too tightly. These two plants can also decline naturally over the five years, whilst the grasses can become too dominant. Diversity must be maintained if the herbal ley is to deliver its full range of potential benefits. It might be necessary to re-establish the sward or look at over-seeding during the 5 years.
- Flowering can continue into late summer and plants such as Chicory and Plantain provide some useful seeds for early winter, consider leaving some areas uncut going into the winter.
- Do not use pesticides or fertilisers. Herbicides are only permitted to spot treat or weed wipe injurious weeds, invasive non-native species. soft and hard rush, Stinging Nettles and bracken.

Evidence

Ensure that the following records are retained and can be provided with your claim:

- Invoices for seed mix used
- Maps showing location of herbal leys (if the option needs to be moved, new maps of the location will be required)
- Photos showing locations and conditions of established areas. Photos of the diverse ley in flower are particularly valuable evidence that the ley is working well. These should be taken annually and sent to your Severn Trent Agricultural Advisor
- Speak to your Severn Trent Agricultural Advisor about eligibility, guidance or evidence required for this option.



Wild flower margins and mini-meadows

How does this help the environment?

This option goes some way to mimic our traditional native wild flower meadows, 97% of which have been lost in the UK since World War II. It provides areas of flowering plants in an arable landscape, which provide essential food sources for beneficial pollinators and habitat for invertebrates that will feed farmland bird chicks in the summer. If managed correctly this option will provide a more lasting and natural habitat than the annual pollinator mix. These native flower margins and mini-meadows can get better year after year and should not need re-establishing.

How does this help my farm business?

Native flower mixes can attract and support natural predators of crop pests, benefitting the adjacent crop. Wild flower margins and mini-meadows will benefit from sympathetic grazing and hay cuts, potentially adding value to the farm business. This option works well for taking out awkward areas and making field work more efficient.



Biodiversity monitoring service

We are offering a monitoring service to measure the biodiversity improvements created by this item. Speak to your Agricultural Advisor if you're interested in this.

STEPS030



Grant value: £2500/Ha.

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



Eligibility

The option must be established in the first year and managed in the same location for the remainder of the 5 year agreement.

This option should only be used on cultivated land, not a suitable option for permanent pasture.

> Sward diversity must be maintained.

Do not use where evidence or records exist of important arable plants or adjacent to Sites of **Special Scientific Interest** (see Magic.gov.uk).

> Speak to your Severn Trent Agricultural Advisor about eligibility.

STEPS030 Margins and mini meadows

Guidance

- Establish a mix containing both native wildflowers (minimum 10%) and native grasses (maximum 90%).
- Robust wildflowers that are most likely to establish well should be used. These include, but are not limited to, at least 10 different species from; Bird's-Foot Trefoil, Common Sorrel, Ribwort Plantain, Self-Heal, Yarrow, Wild Carrot, Meadow Buttercup, Ox-Eye Daisy, Black Knapweed, Lady's Bedstraw, Field Scabious, Wild Red Clover and Musk Mallow. Yellow/Hay Rattle can usefully be added to the mix as it reduces the vigour of grasses allowing better establishment of broadleaves.
- Non-competitive grasses might include Smaller Cat's-Tail, Sweet Vernal Grass, Common Bent, Crested Dog's-Tail, Sheep's Fescue, Smooth-Stalked Meadow Grass.
- The mix can be established on all soil types and in most locations, but it works best in south or south-southwest areas with a sunny aspect. Speak to your seed merchant about soil types and fertility.
- The mix can be sown either in spring or late summer, depending on ground and weather conditions. Options for weed control are limited once established, so aim for as clean a seedbed as possible.
- Seeds need to be broadcast or surface drilled, any deeper than even 1cm can adversely affect establishment. Best results can be achieved by rolling before and after sowing.
- In the first year of establishment be prepared to cut the area multiple times, to a height of 5cm when the area reaches 15cm in height. If practical, grazing with sheep in the autumn may aid establishment.
- In the second year set out to replicate the simple traditional late season hay cutting that has maintained wild flower meadows for centuries:
 - Do not cut before 15th July and leave until 15th August one year in 3, but please speak to your SevernTrent adviser if the season dictates that you need to cut earlier
 - Cuttings should be removed otherwise rank grasses, docks and thistles can out compete the flowering plants

- 90% of the area should be cut and removed every year, leaving 10% uncut will leave some wild flowers and long grass to act as a refuge for overwintering invertebrates
- Aftermath grazing in the autumn, if practical, will reduce grass vigour and create small areas of bare ground allowing new seedlings to establish. If grazing is not practical, a light scarification in the autumn can work almost as well
- The area should come into spring as a short turf, allowing wild flowers to emerge ahead of the main grass growing period. If the area is not grazed, this is best done with a late winter mow (before March 15th) however it is important to ensure that any ground-nesting birds or hares are not disturbed.
- The location and extent of this option is down to the applicant and their Severn Trent Agricultural Advisor. When used as a margin, these should be at least 6m wide. Minimeadows could be sited in field corners, used to straighten tramlines in awkward fields and alongside watercourses. Consider how this option could be used to complement existing farm habitats and improve wildlife corridors around the farm.
- You should not drive on the wild flower mix area apart from essential management.
- Do not use pesticides or fertilisers.
- Herbicides are only permitted to spot treat or weed wipe injurious weeds or invasive nonnative species, Stinging Nettles and bracken.
- Speak to your local Severn Trent Agricultural Advisor for further advice about this option.

Evidence

Ensure that the following records are retained and can be provided with the claim:

- Invoices for seed mix used
- Maps showing location of mix areas
- Photos showing locations and condition of established plots. Photos taken when these areas are flowering are particularly good evidence that the option is working well.



Bee & bird food

How does this help the environment?

This mix benefits early emerging pollinators as well as farmland birds. It provides an abundant supply of pollen and nectar rich flowers for early emerging pollinators in the first spring after establishment, and other invertebrates which additionally form part of the diet of farmland bird chicks in their early days. The supply of small seeds then helps to feed farmland birds during the "hungry gap" (winter months and early spring) in the second year after establishment before natural food resources become available in the late spring and summer.

How does this help my farm business?

A diverse farmland bird population is a sign of a healthy food chain at work on the farm. An autumn sown mix can offer better establishment opportunities on heavier soil types.



Biodiversity monitoring service

We are offering a monitoring service to measure the biodiversity improvements created by this item. Speak to your Agricultural Advisor if you're interested in this.

STEPS035



Grant value: £2500/ha.

£500/ha received in 5 annual payments. 5 year agreement - must maintain the same area for 5 years.



Eligibility

Only to be used on cultivated land. It is not an appropriate option for permanent pasture.

The total area must be retained for the duration of the 5 year agreement. The option can be moved around the farm but the same area must be retained. If the option is moved new maps of the location will be required by your Severn Trent Agricultural Advisor.

STEPS035 Bee & bird food

Guidance

- Establish as soon as possible after harvest and before 15 September, in year 1 and year 3 of your 5 year STEPS agreement, by sowing a seed mix containing a minimum of six flower species and five seed-bearing crops.
- To maintain seed and flower provision, retain for 2 years after establishment.
- Seed-bearing crops include winter wheat, winter triticale, winter barley, fodder radish, kale, gold of pleasure, rye. The mix must contain at least 1 non-cereal.
- Flower species include white clover, crimson clover, bird's foot trefoil, common vetch, phacelia, common or black knapweed, rough hawkbit, wild carrot and ox-eye daisy.
- Check with your seed merchant for the best mix for your soil type and situation.
- Plots can receive 50kg per ha of nitrogen in the first spring after establishment to help increase seed production in the following winter.



- Top the whole or half of the established mixture between mid-February and mid-March in the second spring after sowing, to promote legume flowering during early and mid-summer.
- Retain until 15th August in the second summer after sowing.
- The option area returns to the farm rotation on 15th August, which allows time to incorporate any legume biomass to promote healthier soils before drilling the next crop.
- If a following spring crop is planned, the bee and bird food mix can be left in the ground until Jan/Feb/Mar of the crop sowing year to maximise the nutrient and soil conditioning benefits of the sown plants.
- Do not graze.

Evidence

- Ensure that the following records are retained and can be provided with the claim:
 - Invoice for seed mix used
 - Maps showing location of mix areas.
- Photos showing locations and conditions of established areas. Photos of the bee and bird food option in flower over summer and in seed over winter are particularly valuable evidence that the option is working well. These should be taken annually and sent to your Severn Trent Agricultural Advisor.
- If the option needs to be moved and re-established, new maps of the location will be required.



Flowering summer catch crop

How does this help the environment?

This option provides areas of flowering plants to boost essential food sources for beneficial pollinators, as well as invertebrates. which will feed farmland bird chicks in the summer. Depending on sowing time and management, these areas can still be flowering into autumn, when most other flowering species will have faded, greatly extending pollen and nectar availability. As a spring sown crop this option may attract ground nesting birds in suitable locations. There are wider environmental gains as well; soil life will be enhanced, and carbon will be sequestered into the soil.

How does this help my farm business?

Planting a range of quick growing species, with different rooting depths and growth habit, will harvest and recycle soil nutrients, improve soil structure for the following crop, and any legumes will provide some free N. Flower mixes will attract and support natural predators of crop pests, and support native pollinators, essential for oilseed rape and beans.



Biodiversity monitoring service

We are offering a monitoring service to measure the biodiversity improvements created by this item. Speak to your Agricultural Advisor if you're interested in this.

STEPS036



Grant value: Total £750/ha

£150/ha per year (claimed annually for 5 years). 5 year agreement - must maintain the same area for 5 years.

Eligibility

Only available on cultivated land.

This option is designed to be rotational, so can be moved around the farm, but the agreed area must be established each year for 5 years.

Do not use where evidence or records exist for important arable plants or adjacent to Sites of Special Scientific Interest (see Magic.gov.uk).

Speak to your Severn Trent Agricultural Advisor about eligibility.

STEPS036 Flowering summer catch crop

Guidance

- Establish a mix containing at least 5 of the following; Crimson Clover, Red Clover, Berseem Clover, Persian Clover, Phacelia, Buckwheat, Sunflower, Common Vetch, Radish, Mustard.
- The catch crop should be retained until the majority of plants have flowered (and for a minimum of 10 weeks after sowing) before destruction with herbicides or cultivations.
- Check with your seed merchant and agronomist for the best mix for your soil type, position in your rotation and seeding/ cultivation options.
- Seedbed preparation needs to retain as much soil moisture as possible. Super shallow cultivations and direct drilling work well where soil conditions are reasonable.
- Establish in spring or summer following the guidance of your seed merchant and agronomist.
- Once sown, no fertilisers or herbicides should be necessary, but pernicious weeds need to be controlled via spot-spraying. Slugs can be an issue for catch crops, but metaldehyde slug pellets should not be used.



- Method of destruction of the crop in the autumn should be considered early. Excessive cultivations following destruction of the crop will greatly reduce the soil improving potential of this option. Direct drilling and leaving residues at the top of the soil profile work well.
- The option can be sown in spring to replace failed crops/ bare fallow or sown by mid-August after harvest to provide green cover prior to autumn drilling.
- Volunteers should be considered. For interest look at: vimeo.com/294141014
- Speak to your local Severn Trent Agricultural Advisor for further advice.

Evidence

Ensure that the following records are retained and can be included with the annual claim:

- Invoices for seed mix used
- Maps showing option location and area
- Photos showing locations and condition (take photos when these areas are flowering) of established plots.



Enhancing diversity in existing grasslands

How does this help the environment?

The UK has lost 97% of its wild flower meadows since WW2. This option aims to restore plant diversity on grasslands with low biodiversity value. If the grassland can be managed as a meadow, rather than a grazed sward, 'flowering will benefit pollinators. The greater structural diversity of meadows will also benefit a huge range of invertebrates, mammals, birds and amphibians.

How does this help my farm business?

Almost all grassland habitats are reliant on some form of agricultural activity, so new habitats can be created and livestock production can be continued. Hay made from wildflower meadows may contain more stalks than we are used to these days, but is still highly palatable and nutritious. Boosting the area of flowering plants, especially native ones, on the farm will increase populations of both crop pest predators and beneficial pollinators.



Biodiversity monitoring service

We are offering a monitoring service to measure the biodiversity improvements created by this item. Speak to your Agricultural Advisor if you're interested in this.

STEPS037

Grant value: £2000/ha.

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

Eligibility

This option should only be used on permanent pasture with low biodiversity value and where active intervention is required to enhance it. Suitability is at the discretion of Severn Trent.

Establishment is better in low fertility sites, so the potential for this option depends on soil type, pH and nutrient status (e.g. available phosphorus). Soil tests will be required to assess the suitability of fields.

Suitable grasslands are those that may still have some native grass diversity. They will not be dominated by ryegrass.

Grassland habitats are the product of long-term low intensity farming. This option will be targeted to those applicants that show clear commitment to the long term care and management of these fields.

Depending on your site and proposals, an Environmental Impact Assessment (EIA) may be required from Natural England.

Speak to your Severn Trent Agricultural Advisor about this option.

STEPS037 Enhancing diversity in existing grasslands

Guidance

Restoration of the plant diversity of the pasture should start in year one, as the full payment for the 5 year agreement is made in year 1 to facilitate this. The method of restoration will need to be discussed with your Severn Trent Agricultural Advisor, who may need to consult with Natural England or the county Wildlife Trust. Considerations include:

- The use of green hay from a nearby species rich grassland is the preferred method of introducing new seed. It is a tried and tested method, can be more affordable than a purchased mix and is the best way to ensure that new meadows are actually characteristic of their local area.
 - Restoring the plant diversity of fields close to areas of existing species rich grassland can be particularly valuable and makes the option of using green hay that much simpler. Projects adjacent to SSSIs will need to consult with Natural England, who will be supportive and just need to be satisfied that the genetic integrity of the site is respected, hence the preference for using green hay.
- Sadly really good species rich grasslands are few and far between and the option of using green hay might just not be possible. Where it is decided that the best restoration technique is to bring in purchased seed, it must be truly UK native, ideally locally native, and must be agreed with your Severn Trent Agricultural Advisor.
- Be particularly careful about the provenance of species such as Red Clover, Birds-foot Trefoil and Ribwort Plantain. Improved cultivars of these can find their way into mixes to make them appear more affordable. These improved cultivars are very different from our native plants, generally being much larger and less persistent.

In the second year set out to replicate the simple traditional late season hay cutting and aftermath grazing that has maintained our finest wild flower meadows for centuries:

- Do not use any artificial fertilisers
- Herbicides can be spot sprayed only
- To allow seed to set and spread, do not cut before mid-July and try to leave until mid-August every 1 year in 3, but please speak to your Severn Trent Agricultural Advisor if the season dictates that you need to cut earlier
- To further aid seed spread, the field should be made for hay and not silage. Cuttings must be removed otherwise rank grasses, docks and thistles can out compete the finer flowering plants

- Consider leaving approx. 10% of the field uncut to leave some wild flowers and long grass as a refuge for overwintering invertebrates, but this area should be moved around the field to avoid the above concern
- Aftermath grazing in the autumn, if possible, is highly beneficial and creates small areas of bare ground allowing new seedlings to establish. If grazing is not practical, a light scarification in the autumn can work almost as well
- The area should come into spring as a short turf. Early bite grazing is beneficial, but the meadow should be shut up by mid-April or Hay/Yellow Rattle (an annual often referred to as 'the meadow maker' as it supresses grass growth) could be grazed out.

Evidence

Ensure that the following records are retained and can be provided with the claim:

- Where required, evidence of permissions for work (Environment Agency permits, Natural England EIA)
- Soil tests should be taken in year 1 to determine site suitability (please speak to your Severn Trent Agricultural Advisor if you require these). Please keep a copy and forward the results to your Severn Trent Agricultural Advisor for their records
- Maps showing location of option areas
- Photos showing before and after conditions of managed areas and when green hay is being spread or seed sown, etc
- Photos taken when areas are flowering are particularly valuable evidence that the option is working well and should be sent to your Severn Trent Agricultural Advisor annually
- Written proof of UK native provenance for any purchased seed. Suppliers should be signed up to and follow the Flora Locale Code of conduct.
 See below for a list of their approved suppliers growwilduk.com/where-get-uk-native-wildflowerseeds-plants

There is a huge amount of advice on the web about restoring wildflower meadows - look at the websites below for some good advice and case studies -

magnificentmeadows.org.uk/assets/pdfs/ Restoration_using_green_hay.pdf

gwct.org.uk/farming/advice/habitatissues/wildflower-mixtures/

floodplainmeadows.org.uk/about-meadows/ restoration/how-to-restore-meadows

coronationmeadows.org.uk/

armwildlife.info/2018/10/10/using-hay-strewing-asa-technique-to-create-species-rich-grassland/



Dedicated support and advice

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-andagricultural-fuel-oil

Works should also comply with Nitrate Vulnerable Zone requirements:

gov.uk/guidance/nutrient-management-nitratevulnerable-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/ uksi/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 506 506.

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 03708506506 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

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

Useful resources and help

For pesticide handling and washdown facilities

You should notify the Environment Agency of your intentions by calling them on 03708506506 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/wasteexemption-t32-treatment-ofwaste-in-a-biobed-orbiofilter

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-exemptionu10-spreading-waste-to-benefitagriculturalland

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-sensitivefarming-reduce-agriculturalwater-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.

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