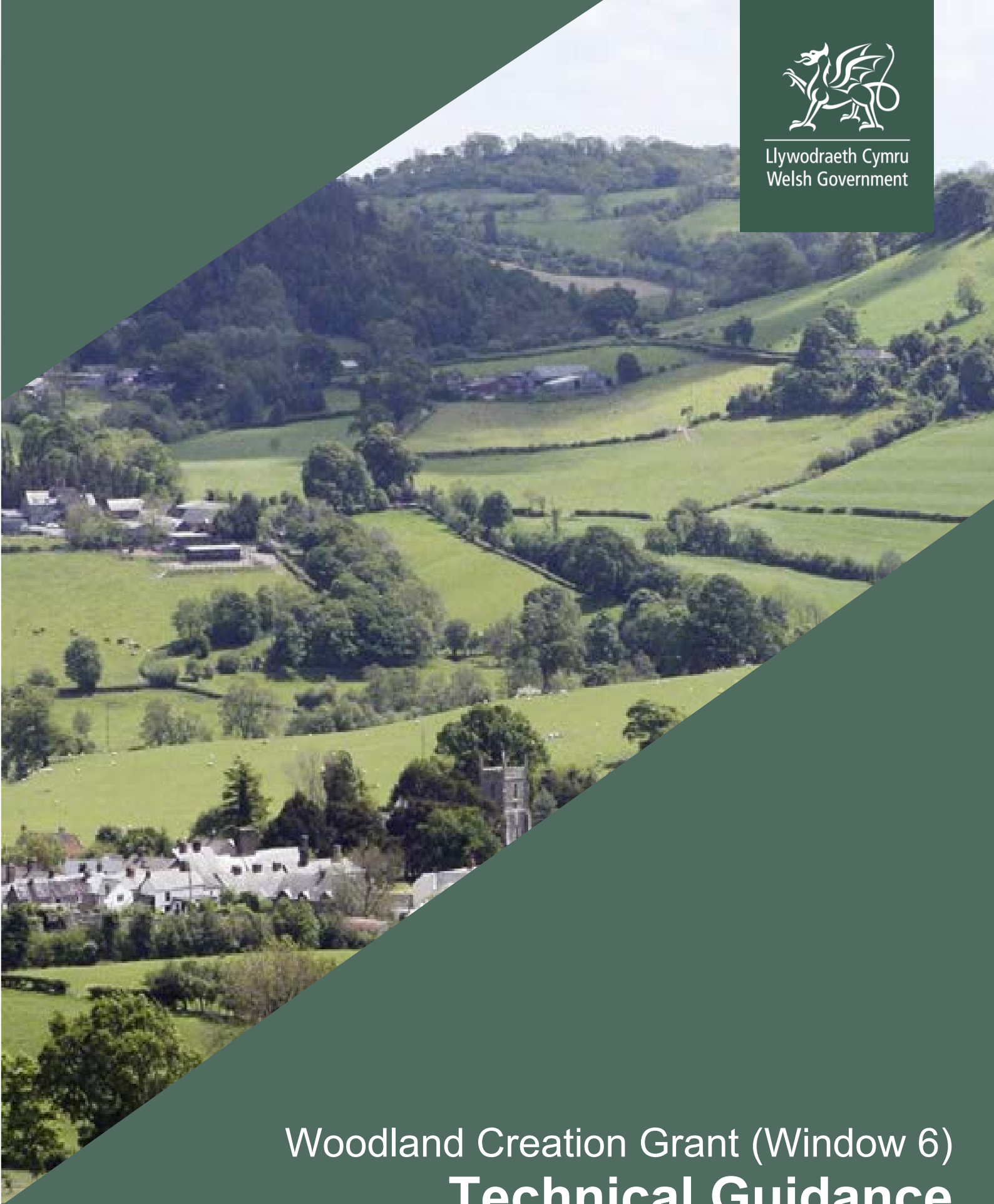


Llywodraeth Cymru
Welsh Government

Woodland Creation Grant (Window 6)

Technical Guidance

WOODLAND CREATION GRANT

TECHNICAL SPECIFICATIONS FOR CAPITAL WORKS

The Woodland Creation Grant (WCG) provides grants for tree planting along with 12 years of maintenance and premium payments. In addition to grants for associated livestock fencing, deer fencing and gates are also available. You need to have a verified Woodland Creation Plan (WCP), which has been written by Registered Woodland Planner (RWP) and verified by the NRW Woodland Programme team, before you can apply for WCG funding.

The Capital Works included in the WCG Contract need to be completed in line with the quantity, location and timing as specified in the Contract. The following Technical Specifications provide the detail of how each Capital Work must be completed.

If any work claimed is found to have been carried out to a different standard, without the prior approval by Welsh Government, the project may be considered ineligible. This will result in claims being withheld (or recovered) with penalties applied in line with the scheme rules, unless work is assessed to have been delivered to an equivalent standard.

You should note that certain works that you are required to undertake as part of your WCG Contract may require consents and permissions over and above those highlighted in these Technical Specifications before commencement of works within this Contract.

CONTENTS

1. GENERAL PLANTING GUIDANCE 5

Planning 5
Timing 5
Ground Preparation 5
Tree Species 5
Buying trees and shrubs 5
Nursery Stock 6
Tree Size 6
Tree Handling 6
Tree Planting 6
Tree Protection 6
Open Space 7
Planting next to rivers, ponds, streams etc 7
Protection against Livestock 7
Maintenance of trees and shrubs 7
Replacement trees (Beating Up) 7
Tree Shelters 8
Claiming the Grant 8

2. WOODLAND CATEGORY PLANTING REQUIREMENTS AND SPECIFICATION 9

P002 - Native Woodland - Biodiversity (1600) 9
P003 - Native Woodland - Carbon 10
P004 - Enhanced Mixed Woodland 11
P005 - Native Woodland - Biodiversity (1100) 12
P006 - Upland Agroforestry - Scattered Trees 13
P007 - Lowland Agroforestry - Scattered Trees 15
P008 - Fruit and Nut Mix 18

3. ASSOCIATED FENCING CAPITAL WORKS 19

P595 - Post and Wire Fencing with Stock Netting 19
P518 - Deer Fencing 21

4. ASSOCIATED GATE CAPITAL WORKS 23

P590 - Standard Gate (Metal) 23
P599 - Standard Gate (Hardwood) 23
P600 - Standard Gate (Softwood) 24
P516 - Timber Bridle Gate and Posts 24
P517 - Timber Kissing Gate and Posts 26

5. ASSOCIATED WATER CAPITAL WORKS 28

P563 - Piped Water Supply 28

P573 - Water Gate 29
P574 - Water Troughs 30

1. GENERAL PLANTING GUIDANCE

The following general guidance is applicable to all (WCG) Categories. Please note the specific requirements relating to **P006 - Upland Agroforestry - Scattered Trees** and **P007 - Lowland Agroforestry - Scattered Trees**

Planning

You can only start to plant the trees when the WCG contract has been agreed. You must follow your agreed WCP. When planning the tree planting, you will need to consider the purchase of trees and shrubs, availability of labour to do the planting, the type of site, weather and how long tree planting is likely to take. You will need to know when deadline is for claiming the grant. The WCG contract will have allocated a year for completion of the work, and you will need to note the deadline for submitting a claim.

Timing

The planting season traditionally runs from 1 October to 31 March but with climate change, the season has been extended. Trees are usually planted over the colder months of the year. You should not plant when the ground is frozen.

Ground Preparation

It is recommended to graze or mow the area of grassland immediately prior to planting, so it is easier to plant the trees. If there is a thick layer of dead material, it is more difficult to firm in the soil around the tree stem.

Ground preparation techniques such as screefing (cut away the turf to expose the soil), scarification and mounding before planting are key to good tree establishment These are options which minimise soil carbon loss. When correctly undertaken, ground preparation will control vegetation and speed up the planting operation by providing a well worked site.

You will have the option to claim up to 15% of the WCG when you have completed your ground preparation. These operations may be inspected by RPW before the payment is made.

Tree Species

The trees species you will be planting will depend on the selected categories in the WCP. No ash or larch must be included in any planting mixture for woodlands due to *Ash dieback disease (Chalara fraxinea), and Phytophthora Ramorum)*.

Buying trees and shrubs

Where possible, use UK tree nurseries to minimise the risk of importing tree pests and diseases. Plant Healthy tree nurseries Directory - Plant Healthy - have been certified to demonstrate that the trees and shrubs have been grown in the UK and the biosecurity risk of importing pests and diseases is minimised. You can collect the seeds yourself and grow onto trees and shrubs as long as you comply with the WCP.

Nursery Stock

Bare Root – trees are lifted from the ground with bare roots and packaged together in bundles. Bare rooted stock is used most regularly for new planting but needs to be stored and handled carefully so that the roots do not dry out.

Cell Grown (Plugs) – grown in plastic trays which create a narrow plug of fine roots and soil. These trees allow the planting season to be extended at either end as the roots can grow within the soil plug and avoid damage during planting.

Pot Grown – grown in an individual plant pots and are usually shrubs such as holly.

Tree Size

Smaller planting stock is usually best for tree planting because of the "root-to-shoot" ratio, meaning that there will be a lot of roots and relatively few branches and leaves. Consequently, the trees are more likely to establish quickly and successfully, and once established they will be more firmly rooted and will grow faster, than trees which are planted out as larger stock.

Smaller planting stock is usually best for tree planting because of the "root-to-shoot" ratio, meaning that there will be a lot of roots and relatively few branches and leaves. Consequently, the trees are more likely to establish quickly and successfully, and once established they will be more firmly rooted and will grow faster than trees which are planted out as larger stock.

You should generally aim to buy trees and shrubs between 20 and 60cm. Avoid larger and more expensive trees and shrubs e.g. 120-150cm trees and 60-90cm shrubs.

Tree Handling

Young trees are fragile and vulnerable to damage from rough handling between the nursery and their final planting site. It's advisable to get the trees delivered to the site where they are to be used or as close to it as possible. This avoids time-consuming (and exhausting) double-handling of trees and greatly reduces the chance of damage.

Be on hand when plants arrive so that you can ensure they are in good physical condition. ***Keep the roots of bare rooted stock covered at all times before planting to prevent damage and drying out***. Whilst cold is unlikely to be harmful, hot sun and any form of drying, such as an east wind, can very quickly cause damage or kill the plants. If immediate planting is not possible, dig a trench before delivery and store plants in this with the roots covered so they are kept moist and cool. Protect the plants from animals, including rabbits and hares.

Tree Planting

Make sure you follow the WCP. You can either employ a contractor to carry out the tree planting or carry out the planting yourself. You may want to ask the RWP who wrote the WCP for advice on the tree planting.

Tree Protection

Most planting sites have rabbits, hares, deer or voles present, and it is advisable to protect

broadleaves with tree shelters to prevent damage. Conifers can establish without additional protection. Tree shelters can boost the early growth of trees, make maintenance easier and ensure the trees are not damaged by mammals or bracken. We would encourage land managers to consider the use of non-plastic alternatives if appropriate for the site conditions. Your RWP will advise you on the type of tree protection you need in the WCP.

Open Space

Scattered, unplantable open ground can be included within the planting area up to a total of 15% of the total area and individual blocks of unplantable open ground can be up to 0.5ha. Individual areas of open ground over 0.5Ha must be excluded from the planting scheme. You will need to alter the tree spacing in parts of the site to account for un-plantable ground to ensure the required number of trees in the contract are planted.

Planting next to rivers, ponds, streams etc

Aim for a mix of shaded and lightly shaded habitat within the riparian zone – around 50% canopy cover on average but guided by local circumstances and the requirements of priority species. No more than 10% alder should be planted in riparian areas (e.g. next to ponds, rivers and stream etc) in line with the UK Forestry Standard.

Protection against Livestock

New planting under WCG must be protected from domestic animals (including horses, ponies and camelids) and deer by using appropriate boundary fencing for at least 12 years from the first woodland creation maintenance claim.

Maintenance Operations

Maintenance of trees and shrubs

Weed control around trees is crucial, as there will be competition for water and nutrients until the trees establish. You need to control the vegetation around the trees and shrubs for a minimum of 3 years until the trees outgrow the surrounding vegetation. Tall vegetation like bracken or bramble can cause physical damage to the trees and cutting by hand or mechanically is normally required. Cutting or strimming the grass simply makes it more vigorous.

Spot weeding with a suitable herbicide is the most effective method of control. Only properly licensed chemical products can be used and applied by qualified operators. Plastic, cardboard, or woven mulch mats can be used as an alternative to chemical weed control. The better the quality of the initial planting, protection and maintenance, the more likely that the trees will establish quickly and successfully.

Replacement trees (Beating Up)

Beating up is the practice of replacing trees and shrubs to ensure there is 100% tree survival by the end of the WCG contract (13 years). A planting site should be assessed annually for losses towards the end of the summer. Any dead trees must be replaced in the following autumn or spring. Look for any pattern to the losses, in terms of particular areas and species. If losses are

greater than 10-15% and there is no obvious cause, you should consult your plant supplier or seek professional forestry advice.

Tree Shelters

These need to be checked regularly to make sure they are secure. Vegetation will often grow up into tubes and guards. Tubes need to be kept in contact with the ground to deny rabbits and small mammals' access to the stems. Although many products are biodegradable, they can have a negative effect on the growth and stability of the trees if left and should be removed as soon as they are not required.

Claiming the Grant

You claim the tree planting, fencing and gates grants after the work has been completed through your RPW online account.

The annual maintenance and premium are claimed through the Single Application Form (SAF) through your RPW online account in the May a year after the tree planting has been completed.

2. WOODLAND CATEGORY PLANTING REQUIREMENTS AND SPECIFICATION

The technical specifications for woodland creation Capital Works will be included in your WCG contract.

P002 - Native Woodland - Biodiversity (1600)

This technical note describes the minimum standard of work required in order to receive payment for new planting of native broadleaved species under the capital works Woodland Category 'Native Woodland – Biodiversity'

Planting Requirements

This capital works option requires native tree species to be planted.

Trees can be planted in a clumped distribution with variable spacing e.g. the planting should be made up of groups of between 5 to 20 trees of the same species

Specification

- Native species - mix should be site native and largely conform to Habitat Action Plan types (for example upland oak, lowland mixed deciduous woods), however, local conditions may necessitate some variation from these.
- Suitable provenance planting stock
- Maximum 30% woody shrubs allowed
- Clumped distribution of species with variable spacing
- Stocking density 1,600/ha
- Exclude Livestock (including horses, ponies and camelids)

Planting under this option requires - 1,600 tree/Ha which equates to 2.5m spacing between trees although the spacing can be clumped. You may need to increase the stems per hectare in parts of the site to take account of features such as rocky outcrops or unplantable open ground.

A minimum of 1600 stems per hectare must be planted with 100% establishment for 12 years following the year in which the trees were planted.

P003 - Native Woodland - Carbon

This technical note describes the minimum standard of work required in order to receive payment for new planting of native broadleaved species under the capital works planting option 'Native Woodland – Carbon'.

Planting Requirements

This capital works option requires native tree species to be planted.

Trees can be planted in a clumped distribution with variable spacing e.g. the planting should be made up of groups of between 5 to 20 trees the same species.

Specification

- Native species mixture
- Maximum 30% woody shrubs allowed
- Stocking density 2,500/ha
- Exclude Livestock (including horses, ponies and camelids)

Planting under this option requires 2,500 tree/Ha which equates to 2.0m spacing between trees. You may need to increase the stems per hectare in parts of the site to take account of features such as rocky outcrops or unplantable open ground.

A minimum of 2,500 stems per hectare must be planted with 100% establishment for 12 years following the year in which the trees were planted.

P004 - Enhanced Mixed Woodland

This technical note describes the minimum standard of work required in order to receive payment for new planting of native broadleaved species under the capital works planting option 'Enhanced Mixed Woodland'.

Planting Requirements

This capital works option requires a mixture of tree species to be planted.

Specification

- Minimum of 5 major species (at least 10% of each)
- Minimum of 25% broadleaves inclusive of woody shrub element or 30% if the planting area is below the upper limit of enclosure and larger than 30 hectares
- Maximum 10% woody shrub element
- No more than 50% of a single species
- Stocking density 2,500/ha
- Exclude livestock (including horses, ponies and camelids)

Planting under this option requires 2,500 tree/Ha which equates to 2.0m spacing between trees. You may need to increase the stems per hectare in parts of the site to take account of features such as rocky outcrops or unplantable open areas.

A minimum of 2500 stems per hectare must be planted and be alive or have achieved canopy closure for 12 years following the year in which the trees were planted.

P005 - Native Woodland - Biodiversity (1100)

This technical note describes the minimum standard of work required in order to receive payment for new planting of native broadleaved species under the capital works planting option 'Native Woodland – Biodiversity'.

Planting Requirements

This capital works option requires native tree species to be planted.

Trees must be planted in a clumped distribution with variable spacing e.g. the planting should be made up of groups of between 5 to 20 trees of the same species

Specification

- Native species - mix should be site native and largely conform to Habitat Action Plan types (for example upland oak, lowland mixed deciduous woods), however, local conditions may necessitate some variation from these.
- Suitable provenance planting stock
- Maximum 30% woody shrubs allowed
- Clumped distribution of species with variable spacing
- Stocking density 1,100/ha
- Exclude Livestock (including horses, ponies and camelids)

Planting under this option requires - 1,100 tree/Ha which equates to 2.5m spacing between trees. You may need to increase the stems per hectare in parts of the site to take account of features such as unplanted ground or riparian zones. A minimum of 1100 stems per hectare must be planted and be alive or have achieved canopy closure for 12 years following the year in which the trees were planted.

P006 - Upland Agroforestry - Scattered Trees

This technical note describes the minimum standard of work required in order to receive payments for 'Upland Agroforestry – Scattered Trees. Where there are local traditional methods or styles that vary from this standard, these can be used. Any significant variation must be approved by the Welsh Government.

Specification

- 80 trees per hectare
- Individual tree protection
- Minimum distance of 8m between trees
- Not eligible for Woodland Creation Premium payment
- Available on field parcels above the upper limit of enclosure
- Minium area of 0.5ha
- Planting by hand
- Scarification limited to hand tools
- Machinery could be used to dig holes and to help install fences posts

Planting under this option requires - 80 tree/Ha with a minimum distance of 8m between trees to ensure the trees are evenly distributed. You may need to protect the trees from grazing, browsing and damage from livestock. A minimum of 80 stems per hectare must be planted and be alive for 12 years following the year in which the trees were planted.

Tree Planting

The species to be planted are listed in the attached Annex A.

Tree Protection

Tree guard and protection is at the applicant's discretion but must ensure a 100% survival rate allowing for 3years of 'beating up'.

The level of protection required will vary depending on the context, the following should be considered:

- **Height of protection**. The guard will need to provide protection to ensure the growing tip of young saplings are protected from browsing animals.
- **Width of protection**. There will need to be sufficient distance between the tree stem and guard to prevent livestock reaching over and browsing during the early establishment of the tree.
- **Strength**. The guard needs to be strong enough to withstand livestock pushing against it, providing protection around the whole tree and from impact from all directions. Increasing the number of supports will increase the robustness of the structure.

- **Timing**. Livestock can be curious, temporarily installing the tree protection prior to tree planting gives livestock the opportunity to investigate without damaging the tree. It also gives you the opportunity to see how the tree planting will look before you plant.

Further considerations

- Guards can be designed to be tapered (narrow at bottom with increasing diameter with height) to minimise the loss of grazing area.
- A combination of guards may be beneficial to provide protection from wildlife in addition to livestock.

Examples of suitable protection include

- Steel tree guard, steel tree protector - Cactus Tree Guards, Cumbria, UK
- Preformed Weld Mesh Guards 1.8m x 450mm, 2.5mm Wire (farmforestry.co.uk)
- Tree Guard - Flared Top - 1800mm x 600mm | Black Wrought Iron (ultimate-one.co.uk)
- Preformed Weld Mesh Guards 300mm Diam (farmforestry.co.uk)
- "Titan" Tree Guard - Black | Black Country Metalworks

P007 - Lowland Agroforestry - Scattered Trees

This technical note describes the minimum standard of work required in order to receive payments for 'Lowland Agroforestry – Scattered Trees. Where there are local traditional methods or styles that vary from this standard, these can be used. Any significant variation must be approved by the Welsh Government.

Specification

- 50 trees per hectare
- Individual tree protection
- Minimum distance of 15m between trees
- Not eligible for Woodland Creation Premium payment
- Available on field parcels below the upper limit of enclosure
- Minium area of 0.5ha
- Planting by hand
- Scarification limited to hand tools
- Machinery could be used to dig holes and to help install fences posts

Planting under this option requires - 50 tree/Ha with a minimum distance of 15m between trees to ensure the trees are evenly distributed. You may need to protect the trees from grazing, browsing and damage from livestock. A minimum of 50 stems per hectare must be planted and be alive for 12 years following the year in which the trees were planted.

Tree Planting

The species to be planted are listed in the attached Annex A.

Tree Protection

Tree guard and protection is at the applicant's discretion but must ensure a 100% survival rate allowing for 3years of 'beating up'.

The level of protection required will vary depending on the context, the following should be considered:

- **Height of protection**. The guard will need to provide protection to ensure the growing tip of young saplings are protected from browsing animals.
- **Width of protection**. There will need to be sufficient distance between the tree stem and guard to prevent livestock reaching over and browsing during the early establishment of the tree.
- **Strength**. The guard needs to be strong enough to withstand livestock pushing against it, providing protection around the whole tree and from impact from all directions. Increasing the number of supports will increase the robustness of the structure.

- **Timing**. Livestock can be curious, temporarily installing the tree protection prior to tree planting gives livestock the opportunity to investigate without damaging the tree. It also gives you the opportunity to see how the tree planting will look before you plant.

Further considerations

- Guards can be designed to be tapered (narrow at bottom with increasing diameter with height) to minimise the loss of grazing area.
- A combination of guards may be beneficial to provide protection from wildlife in addition to livestock.

Examples of suitable protection include

- Steel tree guard, steel tree protector - Cactus Tree Guards, Cumbria, UK
- Preformed Weld Mesh Guards 1.8m x 450mm, 2.5mm Wire (farmforestry.co.uk)
- Tree Guard - Flared Top - 1800mm x 600mm | Black Wrought Iron (ultimate-one.co.uk)
- Preformed Weld Mesh Guards 300mm Diam (farmforestry.co.uk)
- "Titan" Tree Guard - Black | Black Country Metalworks

List of Eligible Tree Species for Capital Works options:

P006 - Upland Agroforestry - Scattered Trees
P007 - Lowland Agroforestry - Scattered Trees

Trees

Common Alder
Crab apple
Silver Birch
Downy Birch
Beech
Bird Cherry
Wild Cherry
Wych Elm
Common Elm
Hawthorn
Hazel
Holly
Small leaved Lime
Large Leaved Lime
Field Maple
Pendunculate Oak
Sessile Oak
Scots Pine
Aspen
Black Poplar
Rowan
Whitebeam
Service Tree
Wild Service Tree
Crack Willow
White Willow
Almond leaved Willow
Yew
Common (wild) Pear
Plymouth pear
Sycamore
Sweet Chestnut
Evergreen Oak
Horse Chestnut
Rock Whitebeam
Spindle
Goat Willow
Common Sallow
Purple Osier
Common Osier
Eared Willow
Blackthorn
Cherry Plum
Walnut

P008 - Fruit and Nut Mix

This technical note describes the minimum standard of work required in order to receive payment for new planting of native broadleaved species under the capital works Woodland Category 'Fruit and Nut'

Planting Requirements

This capital works option requires native tree species to be planted.

Trees can be planted in a clumped distribution with variable spacing e.g. the planting should be made up of groups of between 5 to 20 trees of the same species

Specification

- Between 10% and 30% commercial fruit trees planting stock
- Maximum 15% woody shrubs allowed
- Clumped distribution of species with variable spacing
- Planting density can vary but minimum distance between trees is 1m & maximum is 10m.
- Stocking density 800/ha
- Exclude Livestock (including horses, ponies and camelids)

Planting under this option requires - 800 tree/Ha which equates to 3.5m spacing between trees although the spacing can be clumped. You may need to increase the stems per hectare in parts of the site to take account of features such as rocky outcrops or unplantable open ground.

A minimum of 800 stems per hectare must be planted with 100% establishment for 12 years following the year in which the trees were planted.

3. ASSOCIATED FENCING CAPITAL WORKS

P595 - Post and Wire Fencing with Stock Netting

These are the minimum standards of work required in order to be eligible to receive payment for 'Post and Wire Fencing with Stock Netting'.

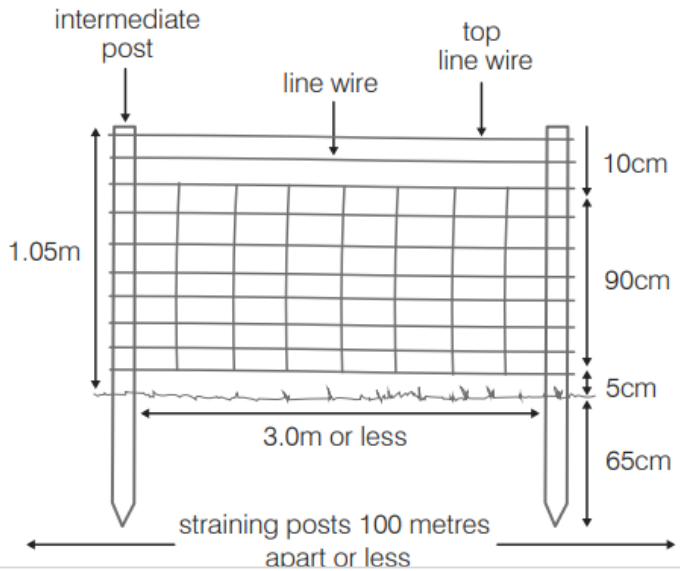
You must adhere to the following:

- Ensure that you have obtained, and adhere to any licences, consents or permissions that are needed.
- Use fencing timber comprising either hardwood or pressure treated softwood.
- Ensure that timbers, wire, netting and galvanised staples consist of new materials.
- Use straining posts that are a minimum of 12.5cm cross section and at least 2m long. Straining posts must be set into the ground at a sufficient depth to ensure stability. Straining posts must be placed at either end of the fence line and at centres of 100m or less, as well as at every horizontal or vertical change of direction.
- Attach struts at each end of the fence line and at all changes of slope and direction. Struts must have a top diameter of at least 6.5cm and must be supported to prevent them splaying outwards. Use intermediate posts that are at least 6.5cm diameter (round posts and sawn timber) and at least 1.7m long. Half round posts are acceptable provided they measure at least 6.5cm from the midpoint of the sawn side to the midpoint of the round side. Intermediate posts must be set at centres of 3m or less.
- Attach netting to posts with galvanised staples.
- Attach wire to posts with galvanised staples with the distance from the ground to the top wire no less than 1.05m. In cases where there is heavy pressure from sheep or cattle, a second line wire on top of the netting as well as an additional wire at the bottom should be added. The top wires of any fencing erected next to public access routes must consist of plain wire or an additional line of plain wire must be affixed to the outside of the posts closest to the route in question.
- Ensure that the new fencing conforms to British Standards 1722 and 4102, as amended.
- Use trees and shrubs as strainers or fencing posts, or attach wire, staples or netting to them.

Requirements and guidance in addition to the specifications above

- Best practice is to set the posts at least 1m into the ground to ensure stability.
- Diagonal struts must be supported with either a base plate or a suitably positioned intermediate post to prevent them splaying outwards.
- Ensure that you have the appropriate Flood Risk Activity Permit if you are planting or fencing near a main river, flood plain or flood defence structure.

Example Diagram of Post and Wire with Stock Netting



P518 - Deer Fencing

These are the minimum standards of work required in order to be eligible to receive payments for deer fencing.

Fencing timber must comprise either hardwood produced from Welsh woodlands or pressure treated softwood. A minimum life of 10 years is required for all timbers used.

Trees and shrubs must not be used as strainers or fencing posts nor may they be used to support fencing wire, staples or netting. Fencing timbers, line wire, netting and staples used to construct approved fence lines must always consist of new materials. The standard payments include an allowance for the dismantling, removal and safe disposal of existing fences. All materials and construction standards must also conform to the following detailed specifications in addition to British Standards 1722 and 4102:

Materials and Construction

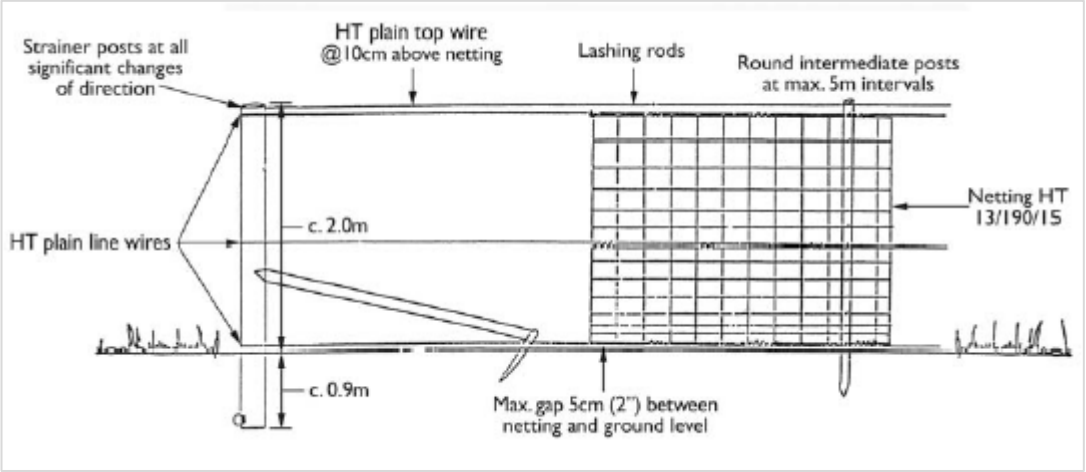
Straining posts	3m x 15cm top diameter minimum	10ft x 6”
Struts	2.75m x 10-13cm top diameter round timber	9ft x 4-5”
Intermediate posts	2.75m x 8-10cm top diameter round timber	9ft x 3-4”
Netting	Either High Tensile type Or Light Weight High Tensile type	HT/13/190/15 LHT/13/190/15
Top wire	1 x 12 ½ g high tensile plain wire	
Line wire	3 x 12 ½ g high tensile plain wire	
Staples	4cm (1 ½ “) 8g	
Finished height	1.9m – 2m (6ft4” – 6ft 6”)	

Construction

Strainer posts to be situated at change of direction (either horizontal or vertical) or maximum 200m (ca. 600ft) on straight run. Dug or driven a minimum 90cm (3ft) into the ground. The strainer struts to be notched and nailed to straining posts stabilised with a sawn rail thrust plate of 50cm x 38cm x 76cm (1ft 9” x 1½” x 3”). Intermediate to be spaced at 5m (16ft 6”) intervals maximum.

The netting must be properly strained and fixed to give a maximum gap of 5cm (2”) between the bottom of the net and the ground. A single top wire to be set 10cm (4”) above the top of the netting. The line wires to be set such that the bottom strand runs along the bottom of the netting; the middle strand runs at a height of 1m (3ft 4”) from ground level and the top strand to run along

the top of the netting. All line wires to be fixed securely to the netting with pig rings or lashing rods.



4. ASSOCIATED GATE CAPITAL WORKS

P590 - Standard Gate (Metal)

This technical note describes the minimum standard of work required in order to receive payment.

Requirements

- A standard new 12ft galvanised seven bar pattern field gate, hot-dip galvanised steel
- Top and bottom rails should be at least 41mm. Diameter tubes and middle rails at least 32mm. Hanging and slamming posts should be either galvanised steel 88mm diameter tubes or treated softwood at least 175mm x 175mm in cross section.

P599 - Standard Gate (Hardwood)

This technical note describes the minimum standard of work required in order to receive payments for 'Standard Gate (Hardwood)'. Any variation must be approved by the Welsh Government prior to starting the work.

You must adhere to the following

- Install timber field gates that are at least 2.4m wide, but no more than 4.2m wide. Any openings greater than 4.2m must have two leaves.
- Use timber field gates constructed from hardwood only, which complies with the dimensions set out in the diagram below.
- Use timber field gates that conform to the specifications set out in the diagram below as well as those of British Standard 3470, as amended.
- Hang gates on timber gate posts at least 2.1m long. Hanging posts must be at least 200mm x 200mm in cross section. Shutting posts must be at least 175mm x 175mm in cross section.
- Set gateposts correctly into the ground, using concrete if necessary and fit with appropriate hangings and latches.

Do not

- Use hanging or shutting posts as straining posts for fencing. A short length of split timber should be used to form a horizontal strut between the gate post and adjacent straining post.
- Use second hand material for constructing gates unless approved in advance by the Welsh Government.

P600 - Standard Gate (Softwood)

This technical note describes the minimum standard of work required in order to receive payments for ‘Standard Gate (Softwood)’. Any variation must be approved by the Welsh Government prior to starting the work.

You must adhere to the following

- Install timber field gates that are at least 2.4m wide, but no more than 4.2m wide. Any openings greater than 4.2m must have two leaves.
- Use timber field gates constructed from hardwood or pressure treated softwood, which complies with the dimensions set out in the diagram below.
- Use timber field gates that conform to the specifications set out in the diagram below as well as those of British Standard 3470, as amended posts must be at least 175mm x 175mm in cross section.
- Set gateposts correctly into the ground, using concrete if necessary and fit with appropriate hangings and latches.

Do not:

- Use hanging posts or shutting posts as straining posts for fencing. A short length of split timber should be used to form a horizontal strut between the gate post and adjacent straining post.
- Use second hand material for constructing gates unless approved in advance by the Welsh Government.

P516 - Timber Bridle Gate and Posts

These are the minimum standards of work required in order to be eligible to receive payments for ‘Timber Bridle Gate and Posts’.

You must adhere to the following:

- Install Timber Bridle Gates and Posts constructed from either pressure treated softwood or hardwood.
- Install gates that are at least 1.5m wide and 1.3m high. Ensure there is sufficient space on one side of the gate for the horse to stand while the gate is being opened.
- Use a ready-made gate or construct a gate. All gate timbers must meet the following dimensions:

  - Uprights should be at least 10cm x 7.5cm in cross section.

  - All rails should be 7.5cm x 2.5cm in cross section except the top rail which should be 10cm x 7.5cm.

- Hang the gate so that it can be opened from both directions.
- Fit latches that allow the gate to be opened without the rider dismounting.
- Ensure that all post timbers must meet the following dimensions;

  - Hanging posts must be at least 15cm diameter

  - Shutting posts must be at least 12cm in diameter

  - Posts must be set into the ground to a sufficient depth to ensure stability.
- Ensure the gate is compliant with BS5709.

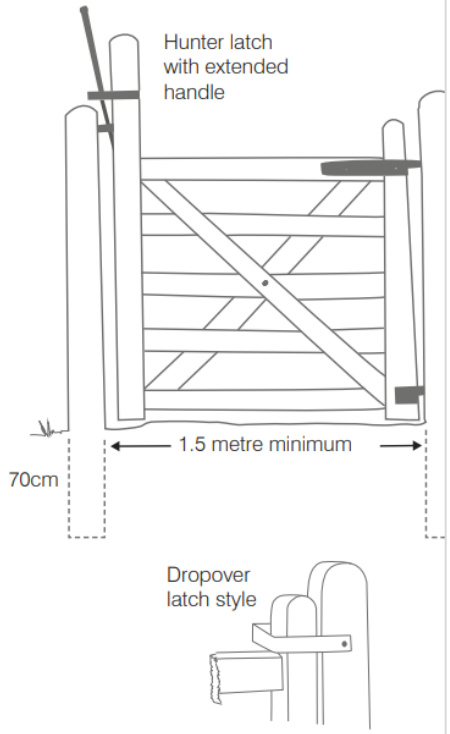
Do not:

- Install bridle gates and posts on Public Rights of Way (PRoW) unless approved by the Welsh Government.
- Use concrete to secure posts in the ground, as it can lead to rotting of the posts at ground level.

Requirements and guidance in addition to the specifications above:

- Use an ‘extended’ or a ‘drop over’ latch to allow the gate to be opened without the rider dismounting.
- In areas prone to vandalism, the top hook can be reversed to prevent the gate being lifted off.
- Best practice is to set the posts at least 70cm into the ground to ensure stability.

Example of a timber bridle gate



P517 - Timber Kissing Gate and Posts

These are the minimum standards of work required in order to receive payments for 'Timber Kissing Gate and Posts'. Kissing gates are used to allow walkers to cross field boundaries.

You must adhere to the following

- Install Timber Kissing Gates and Posts constructed from either pressure treated softwood or hardwood.
- Install a kissing gate that is stock-proof with the gate in any position yet allowing free passage for pedestrians.
- Ensure that the kissing gate is an effective barrier against motorcycles and horses.
- Use a ready-made gate or construct a gate. All gates must meet the following dimensions;
- The gate must be 1.2m wide and 1.2m high.
- A 1m cylinder, must be able to pass through. Note that the 'throat' dimension (the narrowest space to pass through when the gate is opened) must be at least 1m.
- Ensure that post and rails meet the following dimensions;

  – Uprights should be at least 10cm x 7.5cm in cross section.

  – Rails should be 7.5cm x 2.5cm in cross section except the top rail which should be 10cm x 7.5cm.

  – Hanging posts must be at least 15cm diameter.

  – Shutting posts must be at least 12cm in diameter.

  – Posts must be set into the ground to a sufficient depth to ensure stability.

- Hang the gate so that the gate hooks are 'offset' by 3cm. This will cause the gate to close against one of the side posts when released.
- Ensure the gate is compliant with BS5709. The least restrictive furniture must be used as possible e.g. a gate is less restrictive than a stile.

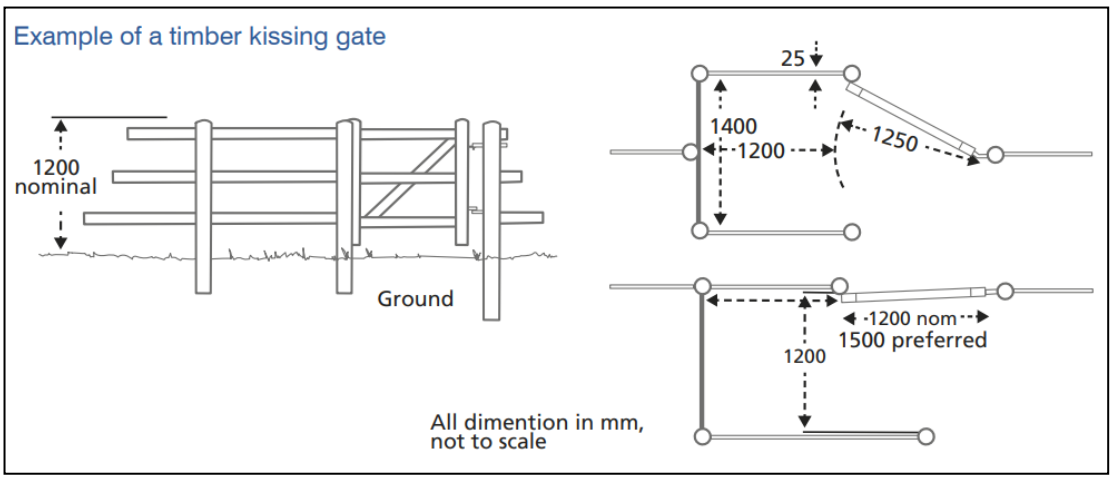
Do not

- Use concrete to secure posts in the ground, as it can lead to rotting of the posts at ground level.
- Use any barbed wire on the kissing gate.

Requirements and guidance in addition to the specifications above:

- For added protection against stock, a self- closing latch can be fitted.

- In areas prone to vandalism, the top hook can be reversed to prevent the gate being lifted off.
- Best practice is to set the posts at least 70cm into the ground to ensure stability



5. ASSOCIATED WATER CAPITAL WORKS

P563 - Piped Water Supply

This technical specification describes the minimum standard of work required in order to receive payments for 'Piped Water Supply'. Any variation must be approved by the Welsh Government prior to starting the work. Piping can be used to supply drinking water to water troughs where stock have been prevented from accessing a permanent watercourse or pond by Woodland Creation Grant activities.

This grant is only available where it is necessary to exclude stock from areas to be planted by a permanent watercourse or pond.

You must adhere to the following:

- Install piping made from medium density blue polyethylene with a minimum external diameter of 2.5 cm.
- Use watertight joints made of brass or plastic.
- Bury pipework to a sufficient depth to prevent damage from surface activities.
- Reinstate disturbed ground to match the surrounding ground once pipework has been completed.
- Protect any pipework above ground from animal or frost damage.
- Ensure any pipes crossing open ditches or tracks are suitably protected. The pipe must be covered by a tubular steel guard or sleeve pipe, laid sufficiently below the ditch to allow space for ditch cleaning. When crossing farm tracks, ensure the pipe is sufficiently protected below the track.
- Control water supply at the point of supply and at each trough by isolating valves/stop cocks.
- The isolating valves/stop cocks must be protected against frost and damage from stock, and must be easily accessible.
- Where valve/stop cocks are buried, this must be at a minimum of 60cm and access should be available through a covered inspection chamber.
- Ensure that the water is able to supply sufficient cold potable water to continuously refill all the water troughs along its length throughout the year within 10 minutes.
- Ensure all water supply works are compliant with British Standards Codes of Practice BS 6572, as amended.

Do not:

- Damage other services such as water supply, waste, gas, electricity or telephone.

Requirements and guidance in addition to the specifications above:

- Consider combining access to valve positions with field drains to make inspection access easier.
- Consider a range of factors when determining pipe diameter. These include: water pressure, water capacity, variable flow, length of pipe, changes in altitude, volume of water required, number of troughs, number and type of stock using each trough.
- Where joints are buried underground, it is advisable to mark their locations, on fence posts for example, to assist with future maintenance.

- Bury pipework to a minimum depth of 60cm although this may need to be deeper if future deep ploughing or sub-soiling is envisaged.
- Lay pipes by trenching, mole plough or sub-soiler, depending on soil type and machinery available.
- Best practice when laying pipes under a ditch is that it is laid 60cm below the ditch to allow space for ditch cleaning.
- Best practice when laying pipes under farm tracks is to lay the pipe on a 7.5cm bed of sand and then covered by a further 10cm of sand before being overlaid by backfill.

P573 - Water Gate

This technical specification describes the minimum standard of work required in order to receive payments for 'Water Gate'. Any variation must be approved by the Welsh Government prior to starting the work. Water gates are required to control stock where fence lines cross rivers and streams. They are especially useful where the water level varies considerably throughout the year.

This grant is only available where it is necessary to exclude stock from areas to be planted by a permanent watercourse or pond.

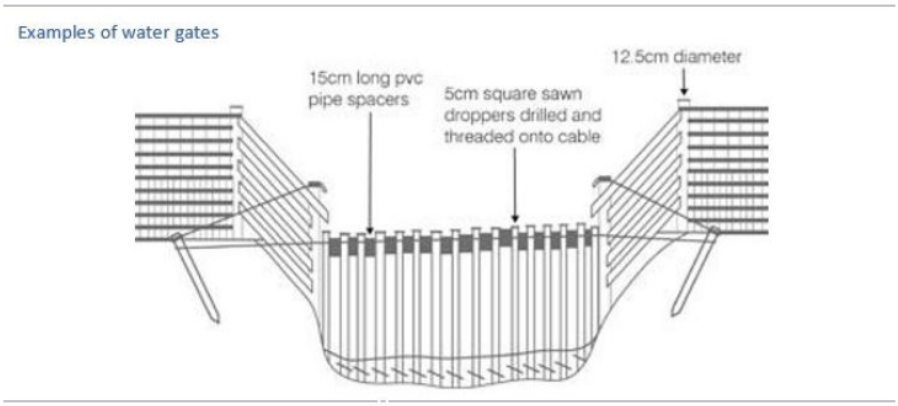
You must adhere to the following:

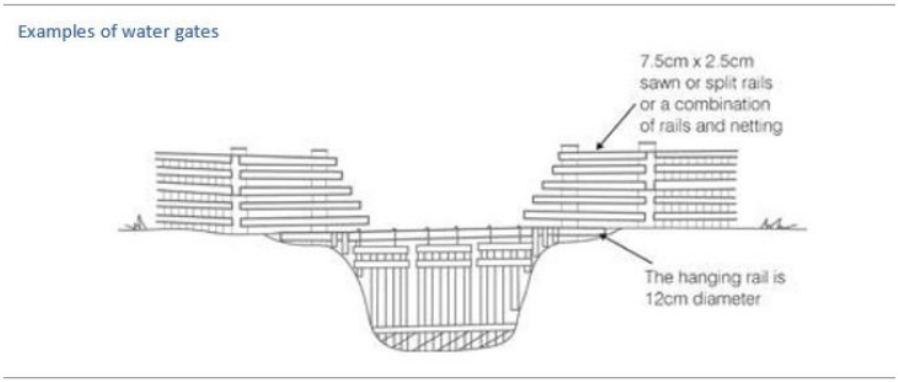
- Construct a gate comprising a series of wooden droppers attached to a length of cable or a round wooden rail which is suspended horizontally between straining posts. Each gate has to be constructed to fit the profile of the individual stream.
- Ensure the water gate is separated from the main fence line by short lengths of wooden rail or netting, fixed to straining posts that have been suitably positioned.
- Attach droppers that are at least 5cm square in cross section. Droppers must be constructed from sawn untreated timbers. The droppers must be drilled and threaded onto the cable of fencing wire with 15cm lengths of plastic pipe acting as spacers. As a result, each dropper is 15cm apart.
- Increase the dimensions of the droppers to at least 7cm square, where the stream gully is over 1.5m deep. Hang droppers on a round wooden pole using loops of fencing wire.

Requirements and guidance in addition to the specifications above:

- Suitable crossing points will have a hard river bottom and reasonable access from both banks. The correct choice of crossing points will make both construction and maintenance easier.
- Hanging the gate separately from the main fence allows the gate to be pulled off during heavy floods without damaging the main fence. Minimum damage will be caused to the gate which can then be recovered, repaired and repositioned.
- It is advisable to create larger water gates in several sections which will reduce the risk of the whole gate being lost or damaged during severe floods.
- It is advisable to periodically clear the base of the water gate, as the accumulation of debris at the base of the water gate will put pressure on both wires and stakes and can result in damage.
- Hang water gates at an angle, with the bottom of the gate resting on the streambed on the

downstream side. This prevents stock passing underneath when the water level drops.





P574 - Water Troughs

This technical specification describes the minimum standard of work required in order to receive payments for 'Water Troughs'. Any variation must be approved by the Welsh Government prior to
starting the work. Water troughs can be used to supply drinking water to livestock where they have been prevented from accessing a permanent watercourse or pond by Small Grants – Woodland Creation activities.

This grant is only available where it is necessary to exclude stock from areas to be planted by a permanent watercourse or pond.

You must adhere to the following:

- Use water troughs made of galvanised steel, plastic or concrete.
- Install a trough at least 1.8m length. They must either be connected to a water supply or supplied from a bowser on a regular basis, in order to provide sufficient potable water. The standard payment includes the cost of fittings such as ball cocks etc.
- Use water troughs that have been specifically designed for the purpose.

- Install the trough so that it does not spill or leak water – the payment rate includes an allowance for base supports.
- Ensure that water troughs conform to current British Standard Codes of Practice.

Do not:

- Locate water troughs in gateways or near footpaths.
- Locate water troughs in wet ground due to the risk of poaching.

Requirements and guidance in addition to the specifications above:

- Do not locate water troughs in known areas of botanical or wildlife interest.
- Aim to cause least landscape impact by locating the trough at the edge of fields, and choose a material that has the minimum impact when viewed as part of the surrounding landscape.
- Install troughs of sufficient size to supply the type and number of stock in the field with their water requirements.

Example of a water trough