



Llywodraeth Cymru
Welsh Government

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Woodland Carbon: A guide for farmers, landowners and managers

Key issues when selling woodland carbon units as a potential new income stream.

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Introduction

Interest is growing in selling woodland carbon units as a potential new income stream for farmers and landowners in Wales. This introductory guide highlights key issues for land managers and owners to consider before entering this rapidly changing marketplace. Alongside woodland, a carbon code exists for peatland and other codes are being developed for areas such as soil and hedgerows, but this guide relates only to woodland carbon and the Woodland Carbon Code.

Key messages

- **Emissions reduction** must remain the priority for all farms and businesses. Carbon credits should only be used to offset any remaining, unavoidable emissions.
- Welsh Government recognises the sale of carbon units to companies and individuals is a valid **source of income** for land owners and managers. Welsh Government's position on when and how they should be sold could change over time as the role of voluntary carbon markets in net zero continue to develop.
- Welsh Government recommends landowners in Wales who wish to generate and sell woodland carbon units should use the **Woodland Carbon Code**.
- The Woodland Carbon Code standard allows for robust **voluntary** carbon offsetting by companies. Carbon units can be used as "credits" against emissions by companies.
- Woodland carbon units can only be generated by planting **new woodland** and projects **must register before any work starts onsite**.
- Woodland creation and producing carbon units are **long term** commitments.
- You may wish to measure your on-farm woodland carbon sequestration to **offset your farm business in the future** rather than sell them as credits. If you intend to sell, you should be aware that prices could rise or fall.

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- Welsh Government does not support schemes that do not adhere to the internationally recognised standards for carbon markets.

What are carbon units?

Carbon sequestration is the process of capturing or removing carbon dioxide from the atmosphere. Trees do this by photosynthesis, turning carbon dioxide into sugars that are converted into wood. The amount of carbon removed, or sequestered, can be measured in units. One carbon unit is one tonne of carbon dioxide equivalent removed from the atmosphere. Planting trees to generate and sell carbon units can be one way of making income from woodland. Buying carbon units offers an opportunity for companies looking to offset unavoidable carbon emissions as part of their plans to reach net zero.

Carbon offsetting is regarded by some as controversial and concerns have been raised that carbon credits may be used for “greenwashing” purposes. Greenwashing refers to when companies make misleading claims about the sustainability of their activities. To avoid greenwashing, it is important that companies take action to reduce emissions and do not rely solely on offsetting to reduce their environmental impact. Companies must also ensure that any offsets they purchase are robust and really capture the carbon they claim.

The Woodland Carbon Code

Welsh Government recommends that landowners in Wales use the Woodland Carbon Code as it conforms to internationally recognised standards for carbon markets and is backed and run by government. The Woodland Carbon Code has been in operation since 2011, and under the rules you need to **register before you start any work on site (tree planting, ground preparation, deer**

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fencing etc.). The tree planting must be **additional**, meaning you only register a planting project if it would not have gone ahead without carbon funding. You can use the Woodland Carbon Code website to check whether the woodland you are planning to plant meets the criteria. Different species of trees, how they are established and the way land is managed affect how much carbon is sequestered. You can calculate this by inputting details of the woodland you intend to plant on a spreadsheet on the Woodland Carbon Code website. Your woodland must conform to the UK Forestry Standard.

The woodland you create needs to be assessed by an independent organisation to verify and validate the carbon units generated. The minimum area that can be considered in Wales is 0.25 hectares. There is a cost involved in the verification and validation processes, so you should explore **collaborating with others** who are creating woodland to share ongoing costs. Woodland planners may be able to help with these type of arrangements, a link to registered woodland planners can be found below in the useful links section below. The woodland must also be planted at a minimum density of 400 stems per hectare, with the capacity to reach at least 20% canopy cover.

Under the Woodland Carbon Code carbon can either be sold as:

- Pending Issuance Units (PIUs)

This is known as the “upfront payment market” and is a promise to deliver under the Woodland Carbon Code. The amount of carbon dioxide that will potentially be sequestered is estimated over a period of time and the buyer pays upfront. Prices paid for PIUs are usually lower than those for WCUs. By buying PIUs, buyers are not directly offsetting their carbons emissions but are able to say that they are on the path to carbon neutrality.

- Woodland Carbon Units (WCUs)

This is known as the “through time payment market”. These are credits for

carbon that the woodland has actually sequestered – usually over the previous five years. PIUs are converted to WCUs over time as carbon sequestration is verified and validated. As WCUs can be used by a company to immediately offset their emissions, they tend to attract a higher price.

If you take part in the Woodland Carbon Code you will need to make sure your trees are well managed so that the carbon is captured and stored for the length of the project lifecycle. You should carry out a risk assessment as part of the process of designing the woodland. The Woodland Carbon Code has special arrangements to cover unavoidable losses such as severe storms or tree disease. It does this by operating a 'buffer' account which saves some of the Woodland Carbon Units from every project in a shared account from which units can be drawn down or borrowed to cover these losses (if you draw down more than you have paid into the buffer you will be required to replenish it by planting more woodland or buying additional WCUs). The buffer does not cover PIUs. Carbon losses that are not unavoidable would be a 'default' and result in penalties, so you may wish to consider insurance cover for the woodland carbon.

When generating carbon units you must commit to a permanent land use change to woodland, and also to maintain the woodland as a woodland carbon store or sink. When planting trees you should also use methods of ground preparation that minimise soil disturbance, to avoid releasing excessive carbon from the soil. This will mean having to **replant any areas lost** through events such as fire, disease and storms to ensure the permanence of carbon credits that have been sold. These are long term commitments and, when selling woodland, landowners need to make potential buyers aware of these obligations.

More information about the [UK Woodland Carbon Code](https://www.gov.wales/woodland-carbon-code) (on [woodlandcarboncode.org.uk](https://www.woodlandcarboncode.org.uk)).

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Keeping or selling Woodland Carbon Credits

You will need to decide whether you want to sell your carbon units or keep them for your own use (or a mixture of both). If you chose to sell them, they are 'retired' and only the buyer can use those units for offsetting, you do not have a future claim to them. There is no fixed price for carbon units, and they could be worth more or less in future.

If you are a farmer, you may want to retain your units until you understand how much carbon your farm business is emitting and whether you want to use them as credits to offset your own emissions. You may also need carbon units in the future if you are required to demonstrate carbon neutrality, for example by a company you supply. You cannot use the carbon units that you have sold or committed to buyers to offset your own emissions. Further information is available from [Farming Connect: Carbon \(on business wales\)](#).

The Sustainable Farming Scheme (SFS) proposals contain Universal Actions aimed at carbon sequestration, including a minimum level of tree cover. Woodland where carbon credits have been sold will count towards minimum tree cover under SFS, although details regarding how this will affect payment rates and how sequestration will be calculated for SFS purposes still needs to be finalised. This should be in place for the start of the scheme in 2025.

You can sell both PIUs and WCUs to companies looking to offset their UK-based emissions, although only WCUs can be used by companies for reporting purposes. WCUs tend to attract a better price than PIUs but you have to wait longer as they need to be verified. The location of the project, its benefit to wildlife, communities and water can also affect the price, often buyers are looking for more than just carbon offsetting. Some organisations offer brokerage and/or woodland management services which can include arranging verification and validation of carbon credits and finding a buyer. It can be difficult to predict what price you might receive for your carbon units. Currently, prices range from

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£10 to £30 a unit. This means that, over the life of the project, you could receive a total amount of anywhere between £1,000 to £15,000 per hectare.

Carbon credits from the Woodland Carbon Code can only be used by companies to offset their UK emissions. If you do sell carbon units, you may want to consider if there are advantages of doing so to businesses and individuals based in Wales. Some companies like to support tree planting that is local to their business area because it may help with marketing and community engagement. If you sell your carbon credits to organisations outside of Wales, the carbon sequestered is recorded in Wales's greenhouse gas inventory and currently counts towards Wales's statutory climate targets rather than the part of the UK they are sold to. This could change in future, for example when the decisions about carbon credits made at COP26 are operationalised.

If you choose to sell carbon units, it is still your responsibility to make sure the trees survive and continue to capture carbon for the lifetime of your agreement with the buyer. If the trees are destroyed by events including fire, drought or storms you will need to replace them to compensate for the credits sold.

What other things do you need to remember?

- Registering to sell carbon is not permission to plant trees, you may need this as well (see [Woodlands and forests \(on Natural Resources Wales\)](#)).
- In most situations, you can receive financial support for woodland creation, for example through grant schemes (see [Woodlands and forests \(on Natural Resources Wales\)](#)) **and** still sell the carbon providing you are able to meet the additionality rules of the Woodland Carbon Code. Additionality rules mean that the project would not have gone ahead without carbon funding. You should use the spreadsheets on the Woodland Carbon Code website to check this.
- Only carbon stored by **new woodland creation** can be sold, and projects

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must **register before** work starts on site (tree planting, ground preparation, deer fencing etc.).

- Projects are monitored or ‘verified’ initially every 5 years and then at least every 10 years to make sure the trees are growing as they should be, and the buyer is funding genuine carbon sequestration. If things go wrong, such as a fire or disease outbreak, it’s the responsibility of the landowner to replant.
- Species, planting density and establishment method can all impact the amount of carbon which is available to sell.
- Prices for carbon credits can go up or down. WCUs tend to attract a better price than PIUs but you have to wait longer.
- Tenant farmers can register for the Woodland Carbon Code as long as they have the landowner’s permission.

The Woodland Carbon Process involves several stages, including an ongoing commitment to monitor and verify projects. The steps include:

- Planning/Pre-registration
- Registration
- Validation
- Monitoring
- Verification
- Continued monitoring and verification (every 10 years for the lifetime of the project)

Useful links

- [UK Woodland Carbon Code \(on woodlandcarboncode.org.uk\)](https://www.woodlandcarboncode.org.uk)
- [Carbon - Farming Connect \(on business.wales\)](https://business.wales)
- [Woodland Carbon: Farmers and Landowners - Woodland Trust \(on woodlandtrust.org.uk\)](https://www.woodlandtrust.org.uk)

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- **Voluntary Carbon Markets and Offsetting - Climate Change Committee (on theccc.org.uk)**
- **Registered woodland planners: contact details**

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