



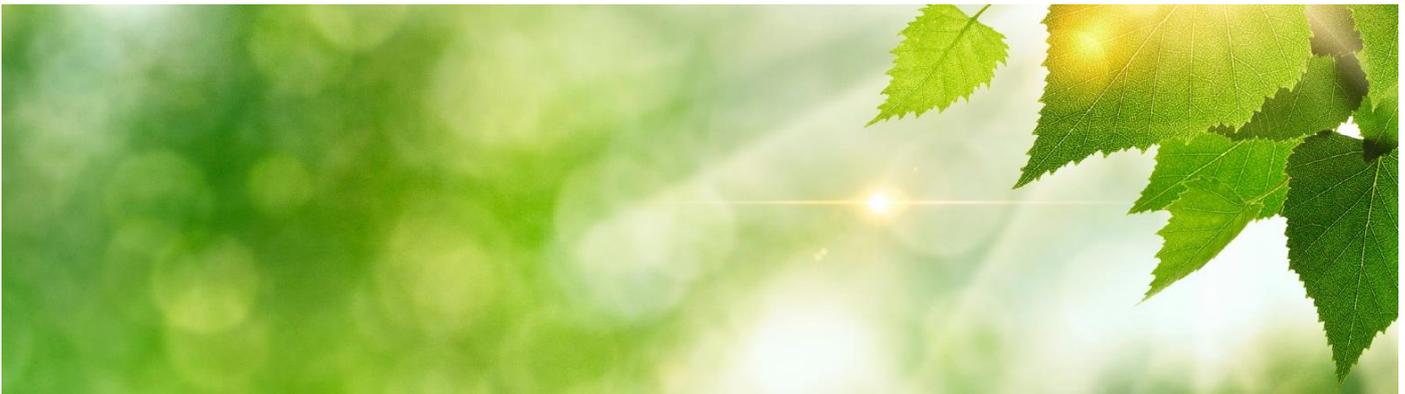
ENVIRONMENT AND LAND USE

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REFERENCE

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CARBON MARKETS FOR LANDOWNERS



1. INTRODUCTION

In response to the climate crisis, the UK Government made a commitment in 2019 to have a net zero economy by 2050. This has sharpened political and business thinking on how to address climate change with analysis of how this can be achieved as a whole, by sector and by business.

For the land use sector there are challenges related to reducing emissions in agriculture, but also opportunities for sequestering carbon through land use change and management. Peatland restoration and afforestation are key actions for carbon sequestration but other land management practices such as increasing hedgerows and creating specialist habitat can contribute.

The English and Welsh governments are including actions for climate change as part of their new agricultural and environmental schemes and other programmes. However, public funding, even if increased, will not be sufficient, therefore private sector investment is needed to support nature and climate ambitions, and this points the way to growth in environmental markets. Some of these already exist, with carbon markets the most advanced, but there is still work to be done to provide the right governance and market operation to allow them to flourish.

It is estimated that 65-85% of growth in carbon markets will be supplied by nature-based solutions in the short-term before other technological advances on carbon capture. These markets present an opportunity for income for landowners. Demand is increasing, with carbon prices continuing to rise, but supply is not yet being met.

This Guidance Note explores some of the key risks and opportunities for landowners looking to get involved in carbon markets, including an outline of different carbon markets, how to access them, carbon sequestration potential and prices, tax and legal issues and how policy is developing.

2. WHAT ARE CARBON MARKETS?

There are two different types of carbon markets: **emissions trading schemes (ETS)**, where *the right to emit* is bought and sold, and **offsetting schemes**, where *emissions reductions or removals* are bought and sold. Both markets trade the same unit: a tonne of carbon dioxide equivalent (CO₂e), often called a carbon credit.

Emissions Trading Schemes

In an Emission Trading Scheme each business within scope receives an emissions allowance from the government. The scheme allows businesses to trade emissions under a 'cap and trade' principle. If the businesses' emissions will be greater than their allowance, they can buy surplus emissions allowances from others in the scheme. Likewise, if a business is within their cap, they can sell their excess emissions allowance. The cap decreases over time, limiting the total amount of carbon which can be emitted by sectors covered by the scheme.

Many high emitting business are subject to the UK or EU ETS, and airlines specifically must offset their future growth under the UN CORSIA programme. A UK ETS has been in place since 1 January 2021 (prior to this, the UK was part of the EU ETS). It applies to energy intensive industries, the power generation sector and aviation. Currently, agriculture and land use are excluded from the UK ETS, so **this Guidance Note focuses on the status of the offset markets.**

Carbon offset markets

Carbon offset markets allow companies to offset their emissions by **purchasing carbon credits**. Carbon credits can be created from any activity, anywhere in the world, that reduces or removes emissions. Such activities fit into three broad categories: **avoidance** (e.g. not cutting down rainforest), **nature-based solutions**, which are of most interest to CLA members (e.g. afforestation, restoring peatland, soil carbon) and **geo-engineering solutions** such as DACCS (Direct Air Carbon Capture and Storage).

Offsets can either be mandatory – through a regulatory compliance scheme – or voluntary. In the UK domestic market, they are largely voluntary, with companies motivated to offset their emissions by internal environmental, social and governance (ESG) policies and/or for PR/marketing reasons. With the increasing pressures for companies to contribute to the net zero economy, the offset market is rapidly expanding. Increasingly this is being referred to as **voluntary carbon markets**.

Offset example: CowCredits

A British-Swiss firm making cattle feed, Mootral, that lowers methane emissions by 30% is aiming to sell 'CowCredits' based on the 'avoided emissions' resulting from reduced methane output from cattle. The company claims that if all 1.5 billion cows on the planet consumed this feed for a year it would reduce CO₂e output equivalent to removing 330 million cars from the road.

This is different to the concept of land-based removals of carbon, but still fits within the definition of an offset under most schemes. Extending this concept, livestock farmers could sell offset credits for reductions in herd size, productivity improvements or if they go out of production.

Criticism of carbon offset markets

Offset markets receive little support from environmental groups, climate activists and others. The chief criticism is that they provide an 'easy out' for heavy-polluting companies to avoid reducing emissions, just paying to offset them instead. It is generally cheaper and easier to offset emissions than to change business practices to reduce carbon within an organisation, which can be expensive and complex. With the climate crisis, reduction of greenhouse gas emissions must be a priority, and offsetting essentially allows companies to put off those necessary reductions.

However, it is acknowledged that some sectors will find it difficult, or near impossible, to get emissions to zero. Under UK Government, Committee on Climate Change (CCC) and United Nations Intergovernmental Panel on Climate Change (IPCC) standards, agriculture and aviation are considered the two sectors that may struggle to get to zero emissions. Without taking carbon sequestration in farm soils into account (which the Government, CCC and IPCC do not), and within currently accepted greenhouse gas metrics (GWP100¹), the technology does not yet exist for these sectors to reduce emissions to zero while continuing to provide air travel and food. Many other sectors – transport, energy, manufacturing/construction – are rapidly decarbonising, but even if the current trajectory continues, there will be residual emissions that will need to be offset to reach net zero. Note that if farming has residual emissions, they may be required to offset those before selling any carbon credits.

The taskforce on Scaling Voluntary Carbon Markets, spearheaded by Mark Carney, published a [report](#) outlining key guiding principles for the development of voluntary carbon markets, tackling some of the criticisms levelled at offset markets, setting out that the carbon markets must have high environmental integrity and seek to do no harm; and, must avoid disincentivising emissions reduction efforts.

The University of Oxford has also established a series of '[Principles for Net Zero Aligned Carbon Offsetting](#)' calling for a high quality offset market that prioritises carbon removal credits, rather than credits created through emissions reduction.

Carbon prices for offsets

As interest around climate change grows and companies start to take action on emissions reductions, the global carbon market is rapidly expanding, with 138 million tonnes of CO₂e credits transacted in 2020 and the EU carbon trading price rising to over €50 for the first time (Figure 1). The global nature of this market can make it difficult to understand the development of carbon credit pricing, as different domestic legislation, mandatory ETSs and corporate reporting requirements can drive price fluctuations that may not be reflected in the UK voluntary market. However, the price increase is beginning to filter down into the UK voluntary offsetting market.

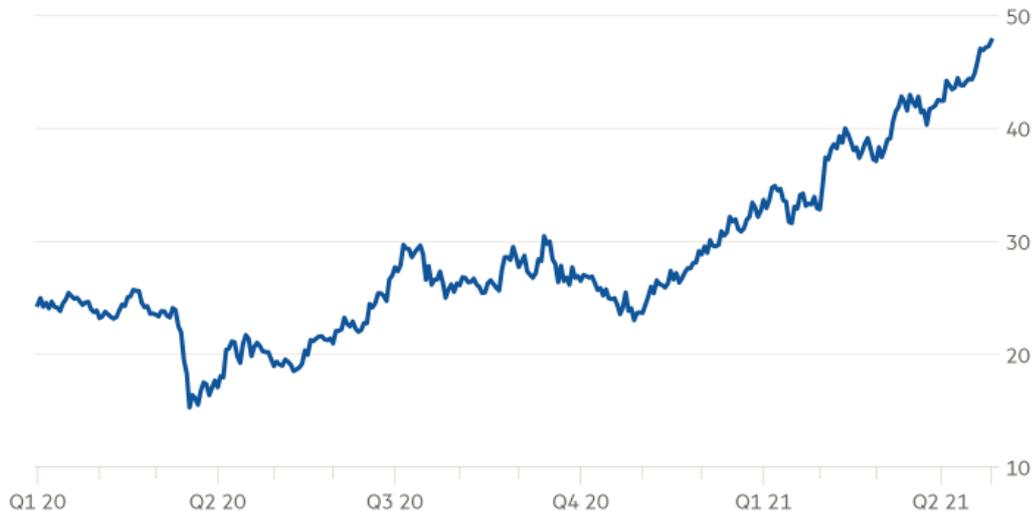
It is important to remember that for now, this is an entirely voluntary market with companies only motivated to join through corporate ESG policies for ethical or marketing/reputational reasons. This will likely continue to be reflected in the price within the UK domestic market. As an example, Woodland Carbon Unit prices through the Woodland Carbon Guarantee Scheme are around £17/tonne CO₂e (2021). For comparison, the UK ETS has a floor price (minimum price limit) of £22/tonne CO₂e. The Carbon Pricing Leadership Coalition (CPLC)'s High Level Commission on Carbon Prices report states that the carbon price level required to deliver the Paris Agreement is USD \$50-100 per tonne of CO₂ by 2030. Carbon prices need to rise if they are to accurately reflect the true environmental and societal cost.

¹ Global Warming Potential (GWP) is the scale used to compare relative potency of different greenhouse gases. The GWP is calculated over a number of years usually between 20 and 100. Carbon dioxide has a GWP of 1 while methane has a GWP of 85 over 20 years and 34 over 100 year because it disappears from the atmosphere relatively quickly. Nitrous oxide has a GWP of 265 over 20 years and 100 year.

Figure 1: EU carbon trading price Q1 2020 to Q2 2021

EU carbon trading prices surge

€ per tonne



Source: Refinitiv
© FT

3. WHAT IS THE CURRENT STATUS OF THE CARBON OFFSET MARKET FOR NATURE-BASED SOLUTIONS?

Nature-based solutions are gaining global traction as one of the cheapest and most attractive ways to offset carbon emissions. By creating or restoring ecosystems, we can tackle both the climate and nature crises, adapt better to flood and drought, and improve public health and wellbeing. In the UK, there are a number of nature-based actions that can support carbon sequestration (as well as wider environmental benefit). The ones of most relevance to CLA members are:

- Afforestation – planting *new* areas of forestry and woodland;
- Lowland or upland peat restoration;
- Increasing the amount of carbon stored in farmed/grazed soils;
- Coastal and marine restoration in saltmarshes or mud flats;
- Agro-forestry or hedgerows; and
- Nature/habitat restoration projects

The carbon offset markets are in a different stage of development for each of these habitats. The market for afforestation is well-established and underpinned by the Woodland Carbon Code (Section 4), as is peat restoration in the Peatland Code (Section 5). Carbon offset markets for soils (Section 6), coastal restoration and other on-farm actions or land management practices like rewilding are very much in their infancy (Section 7).

Principles of carbon markets

There are five key principles that must be met for the land-based carbon removal 'units' to be considered robust enough to sell as carbon credits. These include:

Principle	Rationale
Additionality	The project must be storing <i>additional</i> carbon to what was already there or would have been stored anyway;
Permanence	As carbon dioxide emissions last in the atmosphere for up to 1,000 years, carbon offsetting projects should aim to have some certainty that they will store carbon for a similar period of time;
Quantification	There must be a way – either by proxy or by actual measurement – to measure the carbon stored as accurately as possible to ensure the offset amount matches the corresponding emissions;
Avoidance of leakage	Carbon removals in one area must not lead to an increase in emissions elsewhere; and
Avoidance of double counting	Double counting occurs when the same tonne of CO ₂ e is sold more than once.

An analysis of how carbon markets for forestry and woodland and peatland meet these principles available in Appendix 1, along with an analysis of why soil carbon sequestered in farmed soils faces some challenges in meeting the key principles.

It is important to note that all habitats have different carbon sequestration potential and therefore income for the landowner will vary across different nature-based solutions, regions or even within the farm boundary. Section 8 presented a table that reflects potential carbon prices per hectare.

4. FORESTRY & WOODLAND CARBON

Trees absorb carbon dioxide as they grow, storing it as carbon in the trunk, branches, leaves, roots and soil of the tree. Currently, there are around 3.8 billion tonnes of carbon stored in UK forests, around 75% of it in forest soils. While trees eventually reach a steady state of carbon sequestration, or release it back into the atmosphere as they decay or are cut down, if the trees are being replaced and the land area covered in trees is increasing, there is also an increasing stock of carbon, reducing how much is in the atmosphere.

The UK market for the carbon stored in trees is relatively well-established, structured around the **Woodland Carbon Code (WCC)** – a voluntary government standard for the carbon sequestered by woodland. The WCC independently validates and verifies woodland carbon projects to provide assurance and clarity about the carbon sequestration and storage of specific projects. To date, the WCC has financed projects sequestering 4.7 million tonnes of CO₂e, with the carbon price retailing between £5-£20/tonne of CO₂e.

How can you access the woodland carbon market?

1. *The Woodland Carbon Code*

The Woodland Carbon Code provides a structure for entry to the voluntary woodland carbon market for both buyers and sellers. Landowners can apply to the Code by registering a woodland on eligible land **before planting starts** and working through the registration, verification and assessment steps outlined on the WCC website (woodlandcarboncode.org.uk). When a new woodland is accepted into the WCC, the landowner is issued with Pending Issuance Units (PIUs), estimating the total volume of carbon stored in the woodland across its lifetime. These can be traded, but can't be used to offset emissions until they are converted to Woodland Carbon Units (WCUs), five years after planting and thereafter every ten years. Projects are registered and publicly visible on the [IHS Markit Environmental Registry](#) platform. Registration affords investors full transparency and traceability.

Government-funded woodland grant schemes that cover capital and maintenance costs, including the Countryside Stewardship Woodland creation grant, Woodland Carbon Fund (now withdrawn), HS2 Woodland Fund and the new England Woodland Creation Offer can also be used in conjunction with the Woodland Carbon Code, in Wales there is the Glastir Woodland Creation Scheme and the recently closed Woodland Investment Grant allowing landowners to access both government funding and private funding through carbon credits.

2. *Other carbon codes for woodland*

Landowners can enter into carbon markets for woodland outside the Woodland Carbon Code, should they wish to. This may be through using a different standard or measurement system, including: the Verra Verified Carbon Standard, the Gold Standard and Plan Vivo. These are internationally-recognised, so for some landowners it may help open up the international market, with overseas buyers purchasing credits to offset their emissions elsewhere. The Woodland Carbon Code is only available to offset UK-based emissions.

There may be some benefits to using these other standards. The Woodland Carbon Code is based on conservative estimates of carbon sequestration rates of the different tree species, so in some circumstances, these other standards may demonstrate more carbon is sequestered, therefore increasing the carbon credits available and potential income available. Some companies like [Treeconomy](#) are looking at how new technology, like drones, satellites and LiDAR (light detection and ranging), can more accurately measure carbon storage and provide credits based on those measurements.

3. *Selling Carbon Credits*

You can sell woodland carbon credits direct or more commonly through a broker. There are an increasing number of businesses operating in this market putting buyers and sellers together. The CLA Natural Capital Directory lists a number of these organisations.

The woodland carbon market has been boosted by the government through the [Woodland Carbon Guarantee Scheme](#). Under this scheme, which operates through reverse auctions, the UK government guarantees to buy the carbon credits generated by a woodland creation project at five or ten year intervals, at a price set by the landowner in the bidding process. Auctions take place every few months. If the open market price for carbon credits increases before the actual sales transaction takes place, the landowner is free to sell the credits to a private buyer instead of the government. CLA Guidance Note [GN08-20](#) has more detail or at: <https://woodlandcarboncode.org.uk/woodland-carbon-guarantee>.

5. PEATLAND CARBON

Peatland, both upland and lowland, covers 12% of the UK land area. The waterlogged systems slow down decomposition of plants, storing carbon as peat. Peatland stores 20 times as much carbon as the UK's forests and has the capability to continually sequester and store carbon in near perpetuity. However, due to soil degradation and draining for agriculture, the UK's peatlands are currently a net-emitter of greenhouse gases. Restoring peatland would make a significant difference to climate change targets – the CCC is calling for 100% of upland and 60% of lowland peat to be restored. However, there are currently significant financial barriers to widescale restoration, particularly where the land is used for highly productive agriculture.

The [Peatland Code](#) was established by the International Union for Conservation of Nature (IUCN) to help make UK peat restoration projects financially viable. It is a voluntary certification standard, in a similar way to the Woodland Carbon Code, and provides assurance to carbon market buyers that the carbon purchased through peatland restoration projects is real, quantifiable, additional and permanent.

There are currently six privately financed projects validated through the Peatland Code, and a further 24 projects initiated, the majority in Scotland. These projects aim to avoid the loss of at least 570,000 tCO₂e of peat carbon stocks across 4,992 hectares of peatland. Peatland carbon tends to retail slightly higher than forestry, for around £10-25/tonne of CO₂e, due to the raft of ecosystem benefits provided by restoration, including biodiversity, cleaner water and flood and drought risk management.

How can you access the peatland carbon market?

1. *The Peatland Code*

Entry to the Peatland Code is available for landowners or interested parties looking to restore an area of peatland. The process involves registration, a site survey, the development of a restoration plan and greenhouse gas assertion, validation, implementation of the plan and then ongoing verification. The Peatland Code is centred around best practice requirements, including a standard methodology for measuring carbon sequestration. Through independent validation, buyers are provided the assurance needed to purchase upfront peatland carbon credits to allow for the restoration activity to take place. Some other international organisations or companies have peatland standards, like Verra. However, for a UK-accepted peatland restoration standard, the Peatland Code is the most robust. Peatland Code projects are registered on the [IHS Markit Environmental Registry](#).

2. *Grants and incentives*

The peatland carbon market has not been incentivised through a specific government scheme, however, there are other grants that can be used in conjunction with a peatland carbon project. This includes the Nature for Climate Peatland Grant Scheme (NCPGS) (England only). The NCPGS provides two types of grants:

- Restoration grants: funds landscape scale work on degraded peatlands in England, covering up to 75% of the total project costs and;
- Discovery grants: funding of up to 100% to support applicants in gathering the information they need to apply for a restoration grant.

6. FARM SOIL CARBON

Agricultural soils contain large amounts of stored carbon and have the [capacity to store significantly more](#). However, unlike the carbon markets for woodland and peatland, the market for carbon stored in soils has not yet developed. With 17.7 million hectares of farmed land in the UK, it is estimated that if 1-2 tonnes of CO₂e is sequestered per hectare, per year, farmed land could provide £200m-£750m per year in carbon credits from soils. Alongside this potential financial incentive, there are significant co-benefits associated with increasing soil carbon storage, as it helps build resilience to flood, drought and erosion, protect biodiversity and improve productivity. While the UK government and CCC do not take soil carbon into account when considering carbon budgets, environmental groups like [Green Alliance](#) support the use of farmed soils to meet climate change targets.

For CLA members there may be some significant advantages to accessing soil carbon markets rather than woodland or peatland markets. These include the capability to continue producing crops or livestock on the same piece of land, but there are still considerable uncertainties related to their integrity/quality and other market requirements to reduce emissions (insets) before they can be sold.

How can you access farm soil carbon market?

1. Soil Carbon Code development

Currently, there is no UK Code to enable investment in farm soil carbon sequestration. It is harder for soil carbon to meet some of the key principles required of carbon markets. A consortium of organisations involved in soil carbon accounting, carbon markets and academia have received funding through the Environment Agency Investment Readiness Fund to develop a Farm Soil Carbon Code. The CLA is supporting this work and has been involved in workshops to help develop it. The group estimate that the Code could be up and running by 2024.

2. Other standards

While the Farm Soil Carbon Code is being investigated and developed, a private market is proliferating with different standards and methodologies used, should landowners want to enter into this market without a Code. These include through Verra, Indigo, Gentle Farming and the Gold Standard.

Risks associated with entry to the soil carbon market

While there is potential in the soil carbon market, it is in its infancy and without an established Code, there are significant risks to entry. This is largely due to difficulties meeting the principles of offsets (Appendix 1). In brief, it is particularly difficult to prove additionality and permanence for soil carbon. Soils are subject to flood and drought and may leak carbon through no fault of the farmer/land manager, or land may be sold and be subjected to different management mechanisms in the future which reduce the carbon sequestered in the soil. Healthy soils may have already reached the saturation point for carbon sequestration. Such soils are currently unable to enter soil carbon markets as the carbon is not additional. Furthermore, as soils have different capacity to store carbon it can be difficult, and therefore expensive, to quantify.

8. OTHER CARBON MARKETS ON THE HORIZON

There are other habitats that sequester and store carbon, including in coastal and marine restoration (saltmarshes or mud flats), agro-forestry or hedgerows and in rewilded landscapes. These markets could operate now with a willing buyer and seller, but it may be prudent to wait for the development of a 'code'.

Coastal and marine restoration in saltmarshes or mud flats

The ocean and coastal ecosystems are incredibly important for tackling the climate crisis, with the ocean circulating 83% of the global carbon cycle and coastal habitats accounting for half the total carbon sequestered in ocean sediments. UK landowners in coastal areas have a unique opportunity to ensure these ecosystems are working well for carbon sequestration. A market is developing globally, but is yet to take off in the UK. The UK Centre for Ecology & Hydrology has received funding through the Natural Environment Investment Readiness Fund to develop a **Saltmarsh Carbon Code** to support habitat restoration activities, starting with four sites in East Yorkshire, Essex, Dorset and Somerset. The aim is to develop a rigorous and scientifically based voluntary certification standard to market the climate benefits of saltmarsh restoration.

Agro-forestry and hedgerows

All plant life can sequester and store carbon, so while the focus of many carbon projects are forestry and woodland, there is capacity for agro-forestry (silvopasture or silvoarable) and hedgerows to store significant amounts of carbon. The Allerton Research and Educational Trust has been awarded £80,000 through the Natural Environment Investment Readiness Fund to develop a **Hedgerow Carbon Code**. This project will include field trials leading to the development of a verification code, and determine the potential for farmers to increase the amount of carbon stored in their hedgerows and trade carbon credits.

Nature restoration projects

Natural regeneration of landscapes and creation of habitats, has been growing in prominence, driven by some high profile projects around the UK. Landscapes that are left to naturally regenerate with limited or specific human intervention are capable of sequestering carbon and storing it for a very long period. Natural landscapes sequester carbon more slowly than managed landscapes like forestry, but over the long term (100+ years) the carbon benefits can be greater. Kent Wildlife Trust has been awarded £100,000 through the Natural Environment Investment Readiness Fund to develop a **Wilder Carbon Standard**, aiming to facilitate the restoration of nature at scale, funded by carbon finance. This Standard could be used to develop carbon credits through rewilded areas.

9. CARBON SEQUESTRATION POTENTIAL AND PRICES

Table 1 outlines the carbon sequestration potential of different habitats and therefore estimates potential carbon prices, based on best-available figures, including the Natural England [Carbon Storage and Sequestration by Habitat 2021 \(NERR064\)](#) report.

Table 1 Potential value of carbon sequestration from different habitats

Habitat	Carbon sequestered per ha/year (tCO ₂ e)	Carbon value per hectare per year (range of carbon prices)		
		£10	£30	£50
Woodland				
Native woodland	6-8	£60 to £80	£180 to £240	£300 to £400
Upland conifer	2-4	£20 to £40	£60 to £120	£100 to £200
Lowland conifer	4-6	£40 to £60	£120 to £180	£200 to £300
Farmed soils				
Upland & lowland heathland	-0.05 to 4	N/A	N/A	N/A
Undisturbed semi-natural grassland ²	0	N/A	N/A	N/A
Arable reversion to low input grassland	1.59	£16	£48	£80
Arable/cultivated land	-0.29	N/A	N/A	N/A
Zero/ min till arable ³	0	N/A	N/A	N/A
Improved grassland ⁴	-1.3 to 1	£0 to £9	£0 to £28	£0 to £46
Intensive grassland on deep peat	-24.87	N/A	N/A	N/A
Arable on deep peat	-32.89	N/A	N/A	N/A
Peatland				
Near Natural Fen	0.93	£9	£28	£46
Near Natural bog	0.02	£0.20	£0.60	£1
Rewetted Fen	-8.05	N/A	N/A	N/A
Rewetted Bog	-3.87	N/A	N/A	N/A
Rewilding				
Natural regeneration of native woodlands ⁵	1.78	£18	£53	£89
Other				
Hedgerows	1-2	£10 to 20	£30 to £60	£50 to £100
Agroforestry ⁶	0.33 to 26.97	£3 to £261	£10 to £809	£16 to £1348
Orchards	0 to 2	£0 to £20	£0 to £60	£0 to £100
Saltmarsh restoration ⁷	0.6 to 1	£6 to £10	£18 to £30	£30 to £50

² Across the UK, semi-natural grassland is a significant carbon store (60-87 t C/hectare) but according to the Natural England report there is little evidence as to whether it can continue to sequester and store *additional* carbon so it is assumed it has reached equilibrium.

³ The Natural England report states that zero and min till have minimal impact on soil carbon (p. 82), however, as the Gentle Farming example shows, some third-party certifiers claim to show improvements.

⁴ "Improved grassland" can range from a net-emitter to a net-sequesterer dependent on soil type and modifications (drainage, liming, cultivation, fertilisation etc.)

⁵ Scottish figures, but likely applicable in some England/Wales situations. Data sourced from: Fletcher et al., (2021) *The carbon sequestration potential of Scottish native woodland*. Environmental Research Communications Vol 3: <https://iopscience.iop.org/article/10.1088/2515-7620/abf467/meta>

⁶ Europe-wide figures, aiming to reflect the huge breadth of agroforestry habitats and sequestration potential, without making a distinction between silvoarable or silvopasture, sourced from Kay et al. (2019) *Agroforestry creates carbon sinks whilst enhancing the environment in agricultural landscapes in Europe*, Land Use Policy (83) <https://www.sciencedirect.com/science/article/pii/S0264837718310470>

⁷ Burden et al. (2019) *Effect of restoration on saltmarsh carbon accumulation in Eastern England*. The Royal Society: <https://royalsocietypublishing.org/doi/10.1098/rsbl.2018.0773>

10. CARBON MARKETS AND TAX

Income/Corporation tax

The income from **commercial woodland** (i.e. one that is managed on a commercial basis and with a view to the realisation of profits) is currently exempt from income and corporation tax. Government guidance for those applying for the Woodland Carbon Guarantee implies that the payment for carbon credits is also covered by this exemption. However, there has been no clear statement from HM Revenue and Customs (HMRC) to confirm that these payments are income in nature and exempt so there is a risk that these payments will be taxable as outside the exemption.

If the carbon sequestration payments relate to **non-commercial woodland** planted for carbon sequestration, **peatland restoration** or **soils on farms** then these payments, if income in nature, will need to be declared as business income (or as miscellaneous income if not received in a business capacity) and will be taxable.

Inheritance Tax (IHT)

Commercial woodland qualifies for Business Property Relief (BPR) which should still apply if payments are also received for carbon sequestration. Woodland where the use is **ancillary to the farm land**, or for the cultivation of **short rotation coppice**, qualifies for Agricultural Property Relief (APR), which will not be affected by the receipt of carbon payments for that woodland. Stand alone **amenity woodland**, or woodland managed purely for environmental purposes or carbon sequestration, only qualifies for limited IHT woodland relief.

Future changes to tax

The CLA is actively engaging with Defra, Treasury and HMRC and has made it clear that current tax rules will impact on decisions about a change of land use to deliver carbon sequestration or biodiversity, public goods, whether through public schemes or privately funded agreements.

The tax system must be aligned with the government's environment and climate change objectives. The CLA has recommended that tax law is changed to prevent a tax penalty if land use changes away from agriculture by: deeming environmental land to be agriculture so it qualifies for APR; deeming environmental land management as a trade for purposes of BPR and Capital Gains Tax (CGT) reliefs; introducing a more comprehensive IHT and CGT woodland relief for all non-commercial woodland and enabling diversified businesses to elect to be treated as a Rural Business Unit.

11. INSETS VS OFFSETS

Carbon insets are where an organisation or company pays for **carbon removals within its own supply chain**. In practice, this is an option that is only truly achievable for farmers. However, if a farmer plans to use their own removals as an *inset*, it means they are not available to *offset* another business's emissions. This may exclude the farmer from the market in the future. When thinking about entering offset markets, members will need to consider whether they may need reductions or removals as insets someday.

The insets vs offsets issue has really come to the fore with the recent announcements from Morrisons and Waitrose that they intend to only source from net zero farms from 2030 and 2035, respectively. For farmers who supply to either of these supermarkets, it may be difficult to sequester and store enough carbon to both offset their own emissions (insetting) and then sell carbon offsets to others on top of that if soils aren't taken into account.

Offset example: First Milk, Nestle and Agricarbon

Agricarbon is an initiative supported by the James Hutton Institute looking at developing methods for measuring soil carbon to then generate carbon credits. This has been partly funded by Heathrow Airport as part of a fund for UK natural carbon capture projects.

Agricarbon is working with UK dairy cooperative First Milk, along with Nestle, to baseline soil carbon to allow farms themselves to become net zero. First Milk has set a target of net zero by 2040, aiming for this to be largely achieved through soil carbon sequestration.

If these individual dairy farms use their soil carbon credits to achieve net zero themselves, they will then not be available for sale to a third party.

12. OWNERSHIP OF CARBON

Carbon already stored in soils, peat or woodland is likely to have limited market value as most carbon balance calculations assume that this will remain where it is. Ownership of the sequestration potential within land, coupled with the ability to deliver this additional carbon, could become a valuable asset as carbon markets develop.

The Woodland Carbon Code (WCC) and the Peatland Code provide relatively clear rules around the ownership of the carbon sequestered and stored in land where it is owner-occupied and the landowner is the one undertaking the carbon project.

Woodland: The WCC specifies that to be eligible for a project, legal ownership of the project area land must be demonstrated and both the project and the carbon only appear on one public carbon registry – the UK Land Carbon Registry – through an account owned by the land owner or project developer, so the ownership of the carbon should be made clear. Where the land is tenanted, landowner consent must be sought with the landowner also committing to the WCC for the duration of the project. This may mean that once the tenancy has ended, the landowner is still liable for [‘commitments’](#) under the WCC.

Peatland: Projects under the Peatland Code are designed in a similar way to the WCC. Both the project and the carbon can only appear on one registry.

Soil carbon: It is less clear how ownership of carbon could be delineated between landowner and tenant, particularly in situations where the tenant undertakes the majority of the work to increase carbon sequestration in soils, but is in a short-term tenancy. At this stage of the market development, this would have to be overcome with a well-designed private contract between landowner and tenant.

13. CARBON MARKETS AND GOVERNMENT POLICY

The new Environmental Land Management (ELM) schemes in England and Sustainable Farming Scheme (SFS) in Wales will be important funding routes for many farmers and landowners. These schemes are currently in development and it is essential that they are designed to be able to work alongside private sector markets for carbon and other environmental outputs (e.g. Biodiversity Net Gain). The CLA is actively involved in the development of these schemes and our aim is that they should be complementary to carbon markets with clear rules that enable both public and private funding sources on the same land.

As currently designed, the ELM Sustainable Farming Incentive is likely to prevent people from entering soil carbon markets.

14. KEY POINTS AND CONTACTS

The development of voluntary carbon markets is evolving and we can expect further developments in months and years to come. This guidance note is a picture of the current status. There are opportunities for CLA members, but there are also risks, so it is important to understand how the carbon markets might develop alongside net zero requirements in your supply chains and other market opportunities.

- Carbon credits can only be claimed once, so it is essential to think ahead for your own business needs, before considering selling.
- Government public goods schemes such as Environmental Land Management in England and Sustainable Farming Scheme in Wales, may fund actions to support climate action, which may impact on ability to sell carbon credits.
- It is key to consider the 'quality' of the carbon credits to ensure that the standards being used will stand the test of time and continue to be valid.
- Carbon prices are expected to increase, but it is a highly politicised market place with associated volatility.
- Take appropriate professional advice on contractual agreements, including review of any legal and tax implications.
- You will need to consider carbon ownership issues related to land tenure before committing to a contract.
- There will be new developments and new opportunities, but there will also be competition from overseas projects and technological developments that might change interest in nature-based solutions.
- **Other CLA Guidance Notes** that may be of interest: GN02-21 Natural Capital Tools, Assessment and Plans; GN17-20 Guidance for identifying and entering new environmental markets; GN08-20 Woodland Carbon Guarantee Scheme; GN04-20 Natural Capital, Public Goods and Environmental Markets; GN24-19 Carbon Accounting for land managers; GN15-18 Forestry, Woodlands and Tax
- **The CLA national and regional teams are here to help you navigate the decisions on carbon markets and wider environmental delivery.**

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Susan leads the land use policy team that covers agriculture, forestry and the environment. The development of government public goods schemes and how the work with private sector environmental markets, including carbon markets is a key aspect of the work of the team.

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Alice is the CLA lead on climate change and water. Climate change is becoming part of all policy areas and all business decisions, and it is a key role to ensure that the needs of CLA members are considered in the fast moving policy area.

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APPENDIX 1

Summary of how land-based solutions comply with the offset principles and why soil carbon may fail to meet these principles

Principle	Afforestation	Peatland restoration	Soil carbon
Additionality	Only newly planted woodland is eligible for the WCC and there are a series of tests to demonstrate that the project would not be financially viable without the intervention of a carbon credit buyer	There are four 'tests' under the Peatland Code to demonstrate additionality: <ol style="list-style-type: none"> 1. No legal requirement saying that land must be restored; 2. Carbon finance required to cover 15% of restoration costs; 3. Without carbon finance the project is not the most economically attractive option; and 4. Barriers that prevent implementation have been overcome. 	Given the co-benefits provided by improved soil health, it is difficult to prove that the change in farm management was solely for carbon storage purposes, and would not have done so anyway without carbon finance. All soils have a different capacity to store carbon. Healthy soils with a high carbon content currently will be precluded from accessing these markets.
Permanence	Legislation in the UK requires that all land in forestry and woodland must remain in that land use, with trees replanted if lost for any reason.	It is assumed the restoration is permanent, and if the land is not showing signs of restoration and carbon storage remedial action must be taken. Monitoring of the project must take place for a minimum of 30 years.	In the UK there is no legislation requiring that land with a certain soil carbon content remain that way, so it is difficult to prove that the soil carbon stored will remain there indefinitely, particularly if the land is sold. This could potential be mitigated through the use of conservation covenants. Additionally, soil carbon is vulnerable to flood and drought and may be lost through no fault of the farmer/land manager.
Quantifiable	The WCC provides a standard set of measurements of carbon sequestered, based on their yield class measurement calculator.	The Peatland Code has requirements on greenhouse gas statements and reporting, including regular verification audits.	Soil carbon can be difficult and expensive to measure and all soils vary in capacity to store. At some point, most will reach saturation and stop storing more. This means that healthy soils with an already high carbon content could be excluded from accessing these markets. There is a strong argument that soil carbon, like forest carbon and peatland carbon, should be measured by proxy.
Avoidance of leakage	Due to UK habitat protection legislation, there is an assumption that WCC projects will not lead to increased emissions elsewhere.	Projects must declare any intention to change land use elsewhere on the holding as a consequence of peatland restoration and carry out an assessment to determine potential emissions.	A FSCC would have to contain specific requirements and restrictions to avoid leakage. It is not yet clear how this could be overcome.
Avoidance of double counting	Projects are registered on one carbon registry – the UK Land Carbon Registry and must be listed publicly.	There must be only one owner of the credit and they must be registered on the Peatland Code.	A FSCC would have to contain provisions to avoid double counting, for example, requiring that credits are owned by one person and registered through the FSCC.