



Natural Resources

WEBINAR SERIES

Biodiversity
& Carbon



Carter Jonas

Simply better property advice



Mark Russell



The Environment Act 2021 & Development Land

The 2021 Act



Biodiversity Net Gain



Value to the Landowner & Developer



The Environment Act 2021 & Development Land

Part 1 - Environmental Governance

Part 2 - Environmental Governance: Northern Ireland

Part 3 - Waste And Resource Efficiency

Part 4 - Air Quality and Environmental Recall

Part 5 - Water

Part 6 - Nature and Biodiversity

Part 7 - Conservation Covenants

Part 8 - Miscellaneous and General Provisions

The Environment Act 2021 & Development Land

Part 6 – Nature and Biodiversity

S98 – Biodiversity gain as condition of planning permission

S99 – Biodiversity gain in NSIPs

100 – Biodiversity gain register

101 – Biodiversity credits

Part 6 also covers

Local Nature Recovery Strategies

The Environment Act 2021 & Development Land

Part 7 - Conservation Covenants

Creation

Effect

Breach & Enforcement

Discharge & Modification

Replacement of Responsible Body

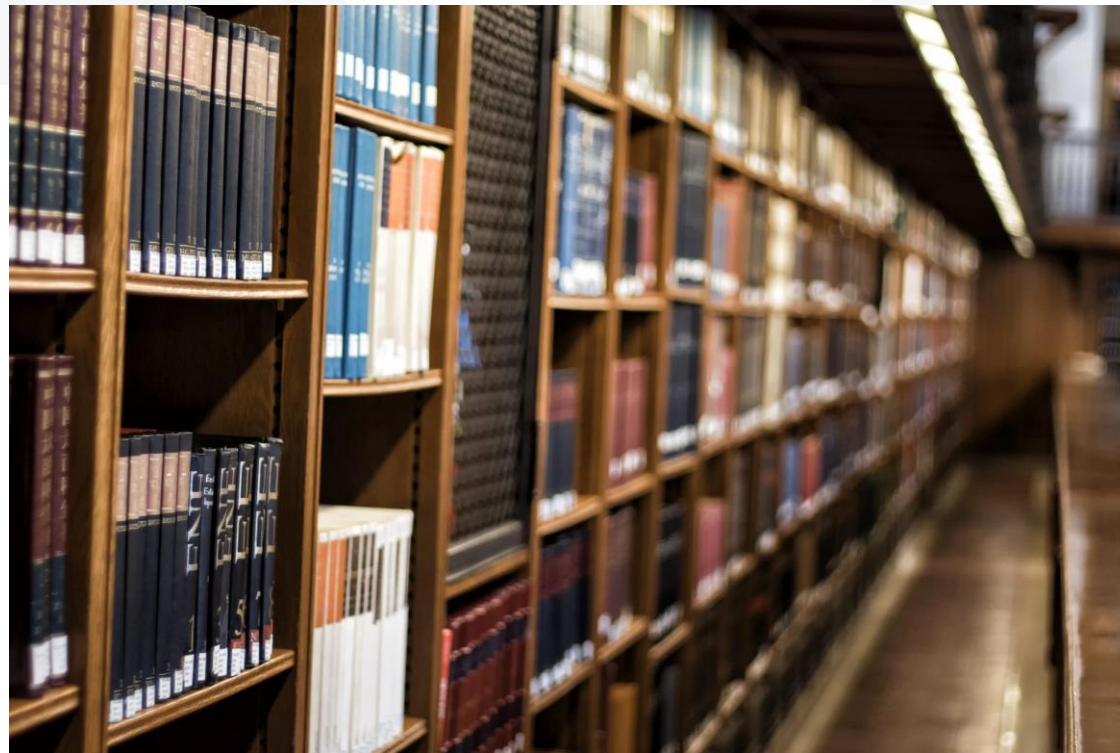
Miscellaneous

Supplementary



The Environment Act 2021 & Development Land

A LOT LEFT TO REGULATION!



Biodiversity Net Gain – Regulation/Consultation

Biodiversity Net Gain Information

- **Pre-development biodiversity value**
- **Steps to minimise impacts**
- **Approach to enhancing biodiversity on-site**
- **Proposed off-site biodiversity enhancements (including credits)**

Biodiversity Net Gain – Regulation/Consultation

Biodiversity Net Gain Plan

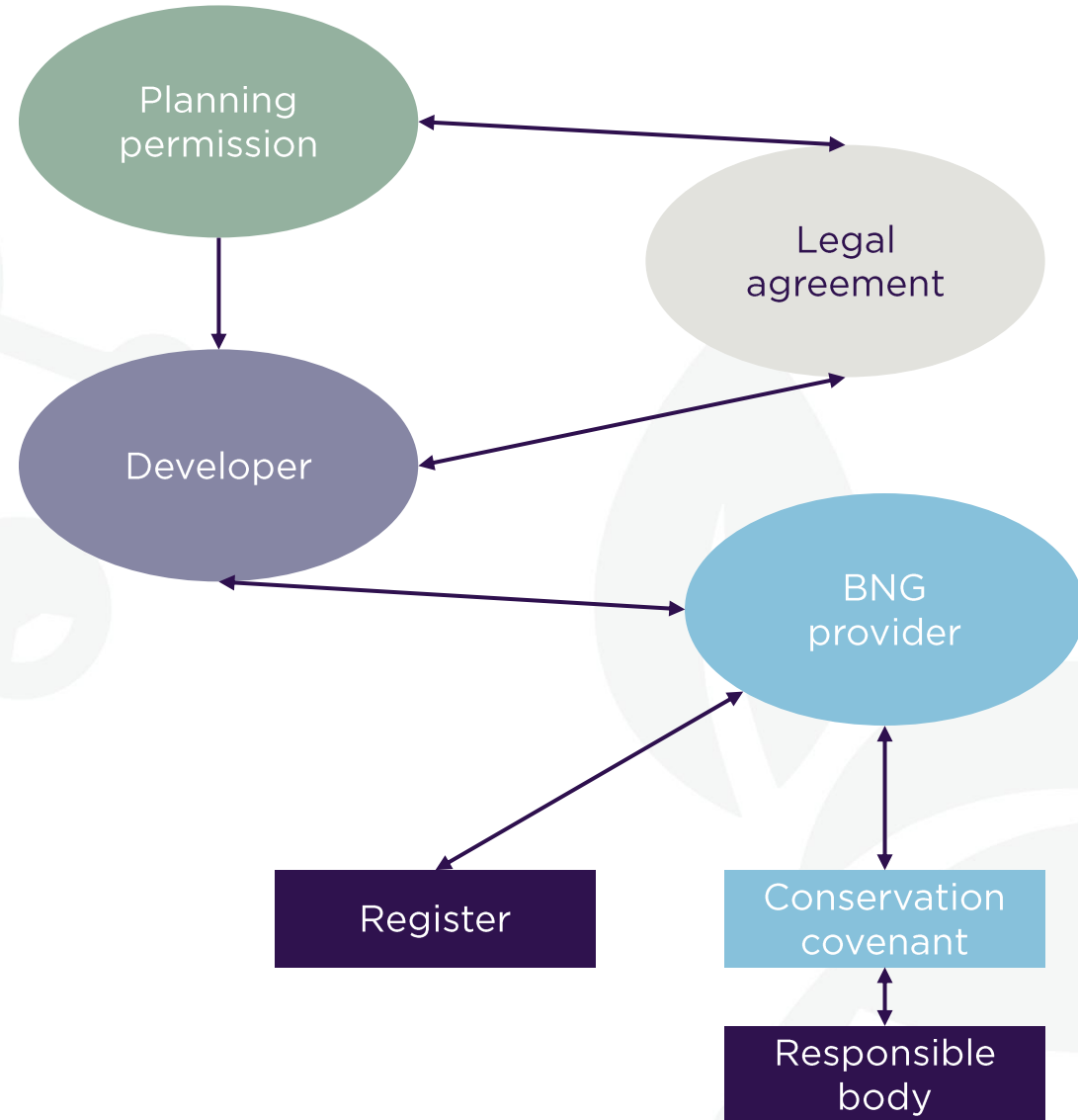
- **Information about steps to avoid and minimise impact**
- **Pre and Post biodiversity value of the on-site habitats**
- **Any offsite biodiversity gains (registered & allocated)**
- **Any biodiversity credits**

Biodiversity Net Gain - On Site



Biodiversity Net Gain - Off Site

Off Site Framework



Pre Biodiversity Net Gain

Site 18.4 ha (Infrastructure Heavy)

6.4 ha Roads and POS

12 ha Houses = 350 units



Argus Developer Calculation

£12.93m land value (£287,000/acre (Gross Area)),

£22m developers profit

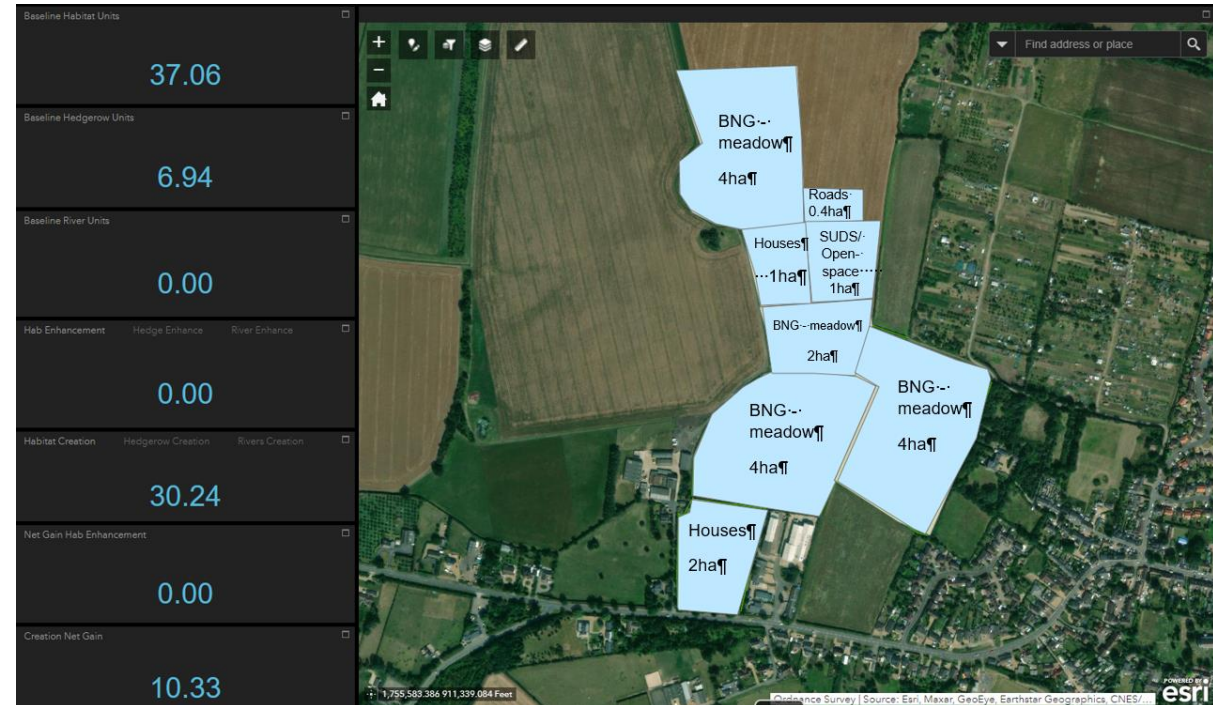
Biodiversity Net Gain – Value Impact

Site 18.4 ha

6.4 Roads and POS (6 ha)

8 Ha BNG Requirement

3 Ha remaining for houses = 90 units



Rough and Ready Calculation

£3.32m land value, £5.66m developers profit

Biodiversity Net Gain – Value Impact - Engineered

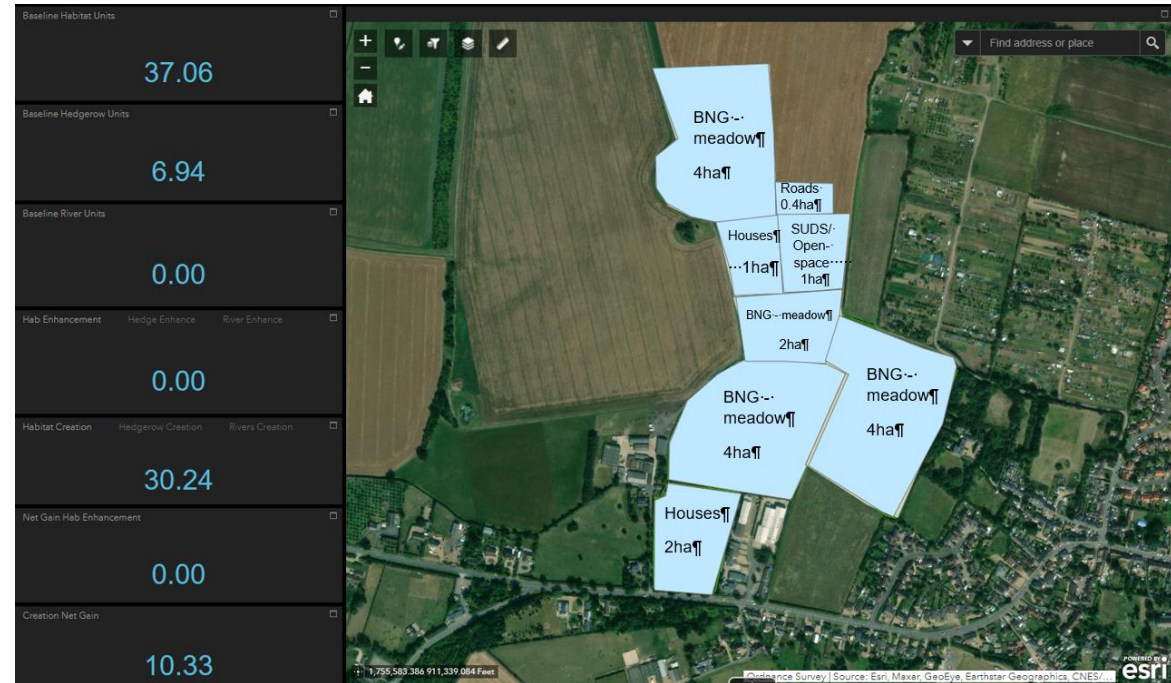
Site 18.4 ha

5.4 ha Roads and POS (6 ha)

5 Ha BNG Requirement

8 Ha remaining for houses & Gardens

= 240 units



Rough and Ready Calculation

£8.87m land value, £15.09m developers profit

Biodiversity Net Gain – Value Impact – Off-site

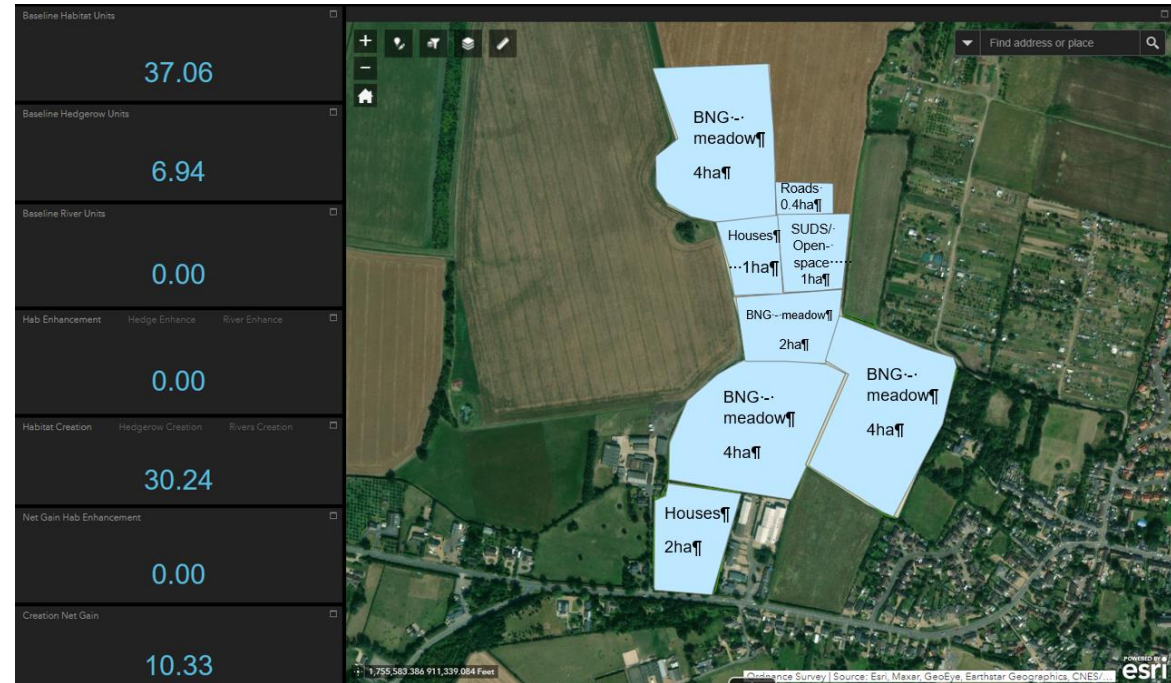
Site 18.4 ha

5.4 ha Roads and POS (6 ha)

4 Ha BNG Requirement (onsite)

9 Ha remaining for houses = 270 units

2 Ha Off-site Net 4.6 units of BNG



Rough and Ready Calculation

£10.34m land value £17.6m developers profit

Cost of units at £25k per unit for 4.6 Units = £115k

The Environment Act 2021 & Development Land Summary

The 2021 Act

- Leading to more Regulation



Biodiversity Net Gain

- Calculation, Strategy & Opportunity



Value to the Landowner & Developer

- Large Impact on Land Value
- Off-siting BNG Critical to Viability





Marc Liebrecht



Carbon Sequestration - Woodland



One hectare of native woodland can sequester 350-400 tonnes CO₂E in 50 years

In one hundred years it can sequester 450-500 tonnes CO₂E

Dependent on species choice and yield class

Subject to validation and verification

Woodland Carbon Code

Woodland Carbon Unit (WCU)

A tonne of CO₂e which has been sequestered in a WCC-verified woodland. It has been independently verified, is guaranteed to be there, and can be used by companies to report against UK-based emissions or to use in claims of carbon neutrality or Net Zero emissions. **-947 units**

Pending Issuance Unit (PIU)

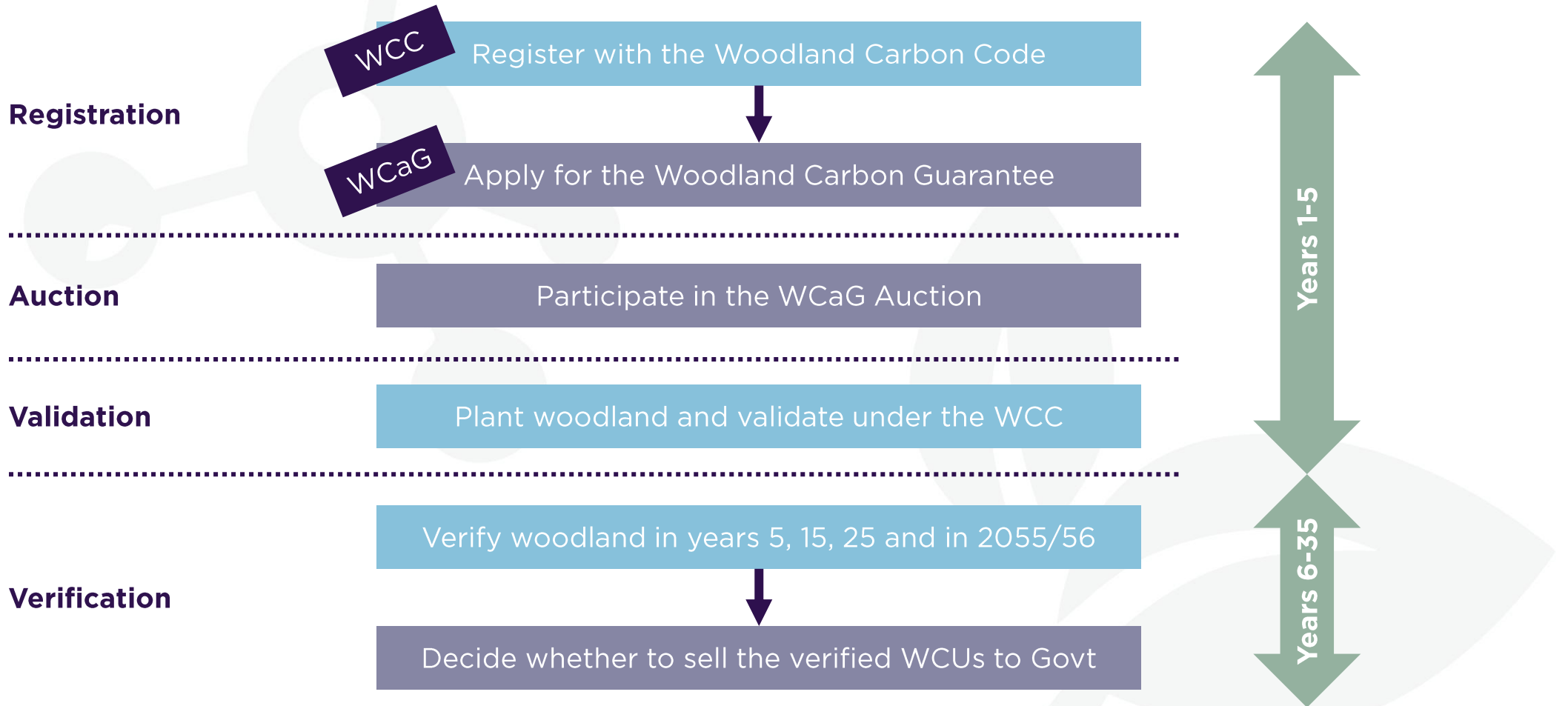
A 'promise to deliver' a Woodland Carbon Unit in future, based on predicted sequestration. It is not 'guaranteed', and cannot be used to report against UK-based emissions until verified. However, it allows companies to plan to compensate for future UK-based emissions, or make credible CSR statements in support of woodland creation-**1.5 million units**

English Woodland Creation offer

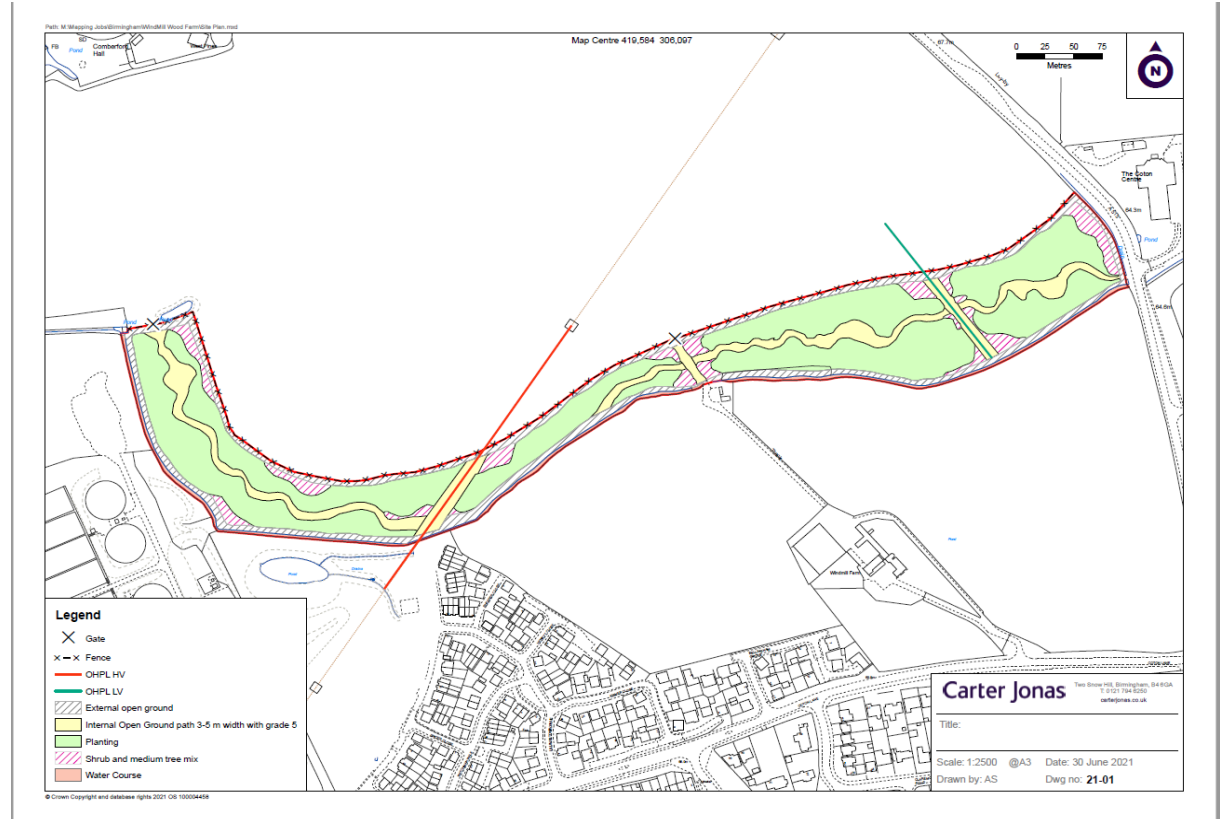
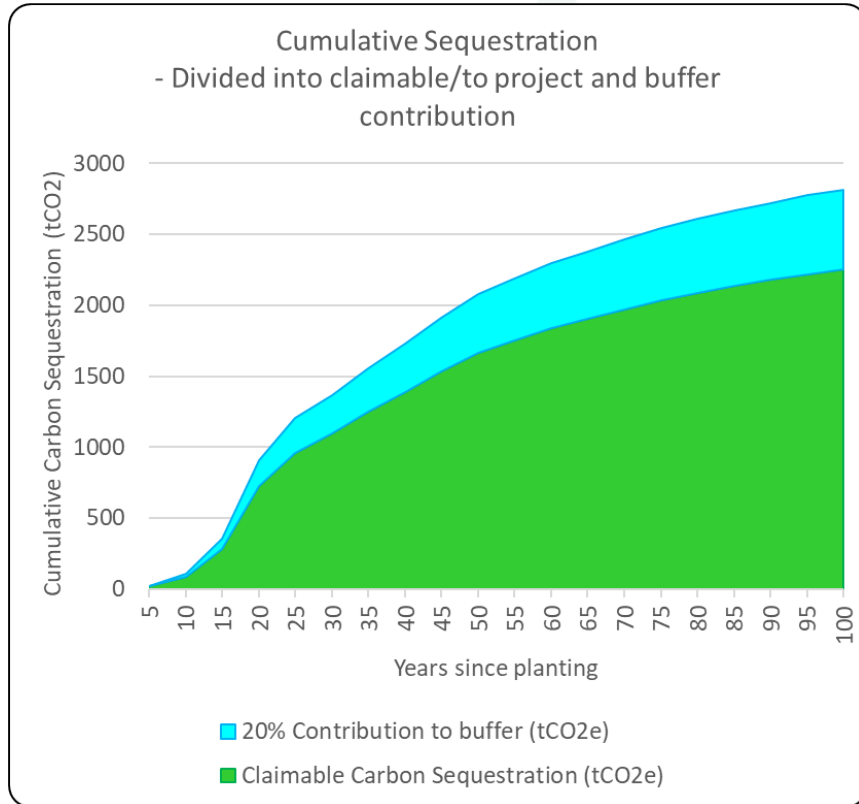
- Doesn't deal with carbon specifically as one of the stackable payments
- Is a more integrated approach
- The EWCO Application Form (Part B) gathers together the information you need to register with the Woodland Carbon Code (WCC) if you want to access private funding for 'Woodland Carbon Units' and apply to the Woodland Carbon Guarantee (WCaG).

Woodland Carbon Guarantee

Additional Income Stream



Example Scheme



Environmental Social Governance

- Environment, social, governance (ESG) is the **measurement of the impact (both positive and negative) that a business has on the environment and on society** including an assessment of the governance practices (or lack thereof) that impact all stakeholders – including shareholders





Lucy Merrill

Carbon and Biodiversity Targets

The Prime Minister has committed to protect 30% of the UK's land by 2030.

25 Year Environment Plan

- Improving the approach to soil management: by 2030 we want all of England's soils to be managed sustainably
- Increasing woodland in England in line with an aspiration of 12% cover by 2060

All sectors to be Net Zero by 2050.

NFU has set the ambitious goal of reaching net zero greenhouse gas (GHG) emissions across the whole of agriculture in England and Wales by 2040.



BNG Examples

Area / Length (Off-Site)	Baseline		Land Intervention: Creation / Enhancement		Estimated Net Gain
	Habitat	Condition	Habitat	Condition	
1 Hectare	Neutral Grassland	Fairly Poor	Neutral Grassland	Fairly Good	2.80
1 Hectare	Arable Land (Cereal Crops; No Winter Stubble)	N/A - Agricultural	Neutral Grassland	Moderate	4.69
1 Hectare	Arable Land (Cereal Crops; No Winter Stubble)	N/A - Agricultural	Arable Land (Cereal Crops; Winter Stubble)	N/A - Agricultural	1.93

Arable Land to Neutral Grassland

Estimated Gain = 4.69 units / ha

Potential Gross Income		£/Per Annum (Straight Line Basis)	
£15,000/unit Trading Price	£20,000/unit Trading Price	£15,000/unit Trading Price	£20,000/unit Trading Price
£70,350	£93,800	£2,345	£3,127

Condition Criteria

Neutral Grassland

The appearance and composition of the vegetation closely matches characteristics of the specific grassland habitat type. Wildflowers, sedges and indicator species for the specific grassland habitat type are very clearly and easily visible throughout the sward.

Sward height is varied creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.

Cover of bare ground between 1% and 5%.

Cover of bracken less than 20% and cover of scrub less than 5%.

There is an absence of invasive non-native species. Combined cover of undesirable species and physical damage accounts for less than 5% of total area.

BNG Examples 2

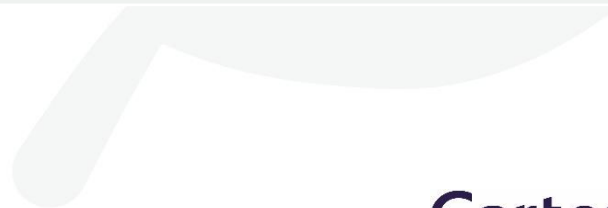
Area / Length (Off-Site)	Baseline		Land Intervention: Creation / Enhancement		Estimated Net Gain
	Habitat	Condition	Habitat	Condition	
50m (0.05km)	Native Hedgerow (Limited Species; No Trees; Not Associated with a Bank or a Ditch)	Moderate	Native Hedgerow (Limited Species; No Trees; Not Associated with a Bank or a Ditch)	Good	0.09
100m ² (0.01 hectare)	Arable Land (Cereal Crops; No Winter Stubble)	N/A - Agricultural	Ponds (Non-Priority Habitat)	Moderate	0.05

Condition Assessment

Hedgerows



Height	>1.5 m average along length
Width	>1.5 m average along length
Gap - hedge base	Gap between ground and base of canopy <0.5 m for >90% of length
Gap - hedge canopy continuity	Gaps make up <10% of total length and no canopy gaps >5 m
Undisturbed ground and perennial vegetation	>1 m width of undisturbed ground with perennial herbaceous vegetation for >90% of length
Undesirable perennial vegetation	Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground
Invasive and neophyte species	>90% of the hedgerow and undisturbed ground is free of invasive non-native and neophyte species
Current damage	>90% of the hedgerow or undisturbed ground is free of damage caused by human activities



BNG Examples 3

Woodland

Area / Length (Off-Site)	Baseline		Land Intervention: Creation / Enhancement		Estimated Net Gain
	Habitat	Condition	Habitat	Condition	
1 Hectare	Woodland (Lowland mixed deciduous woodland)	Fairly Poor	Woodland (Lowland mixed deciduous woodland)	Fairly Good	0.97
1 Hectare	Arable Land (Cereal Crops; No Winter Stubble)	N/A - Agricultural	Woodland (Lowland mixed deciduous woodland)	Moderate	-0.93

Whole Farm / Estate Approach



Peatland Restoration

- England Peat Action Plan highlights the importance of peatland restoration for combatting climate change and contributing to net zero targets
- Nature for Climate Peatland Grant Scheme running until 2025

Income/Cost	1 ha carbon benefits (t/Co2e)	Sale price of £10/T per ha	Sale price of £20/T per ha	Over site of 20 ha at £20/T
Actively Eroding	23	£230	£460	£9,200
Drained	4	£40	£80	£1,600
Discovery Grant (apply in 2022) for upfront survey information and full project feasibility				Up to 100% of costs of survey work required
Grant Income for restoration				75% of restoration costs in most cases

OTHER FUNDING OPPORTUNITIES

- **Countryside Stewardship**
 - Mid-Tier, Higher Tier, Wildlife Offers, Capital Grants
- **Environmental Land Management Schemes (ELMS)**
 - Sustainable Farming Incentive, Local Nature Recovery & Landscape Recovery
- **Farming in Protected Landscape Programme (FIPL)**
 - Now a rolling application window, allowing applications to be submitted up until 2024
- **Farming Investment Fund**
 - Farming Equipment and Technology Fund & Farming Transformation Fund