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Shelter Woods and Woodland Grazing

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Forestry and Farming

not

Forestry or Farming

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Benefits of Woods

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- Shelter
- Source of firewood / chip-wood for on-site boiler
- Alternative income stream, both grants and timber
- Reduction of diffuse pollution
- Bank stabilisation
- Flood reduction
- Sporting

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- Growing asset which adds value to farm
- No income tax on timber sales or grants
- No capital gains tax on the growth in value of trees
- 100% relief on inheritance tax

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Shelter Woods - Benefits

Crops:

- Reduced wind speeds
  - reduced evapotranspiration
  - greater soil moisture retention
  - soil protection
  - reduced physical damage of crops
  - greatest benefit to root/vegetable crops
- Leaf fall
  - increased soil organic content, leading to:
  - improved soil water retention and nitrogen availability

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Shelter Woods - Benefits

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Crops:

- Buffering of features:
  - watercourses, reducing diffuse pollution and run-off
  - utilisation of marginal areas eg. seasonal flooding

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Shelter Woods - Benefits

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Livestock and pasture:

- Reduced wind speeds
  - reduced evapo-transpiration
  - reduced evaporative chilling of livestock
  - improved lamb survival
  - reduced ewe mortality after shearing
  - improved weight gain
  - improved milk yields
  - reduced feed costs

  = Improved animal welfare

  Freedom from Discomfort

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Shelter Woods - Benefits

Livestock and pasture:

- Leaf fall
  - increased soil organic content, leading to:
  - improved soil water retention and nitrogen availability
- Buffering of features:
  - watercourses, reducing diffuse pollution
  - utilisation of marginal areas eg. seasonal flooding, reduction in fluke
  - 'trapping' features
- Animal health – separation of herds

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Benefits to Livestock

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Lower Critical Temperature.

LCT of pregant beef cow is -14^{o}C in still dry conditions, rising to +14^{o}C in wet windy conditions.

= 4kg concentrate a day

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Shelter Design - Windshield

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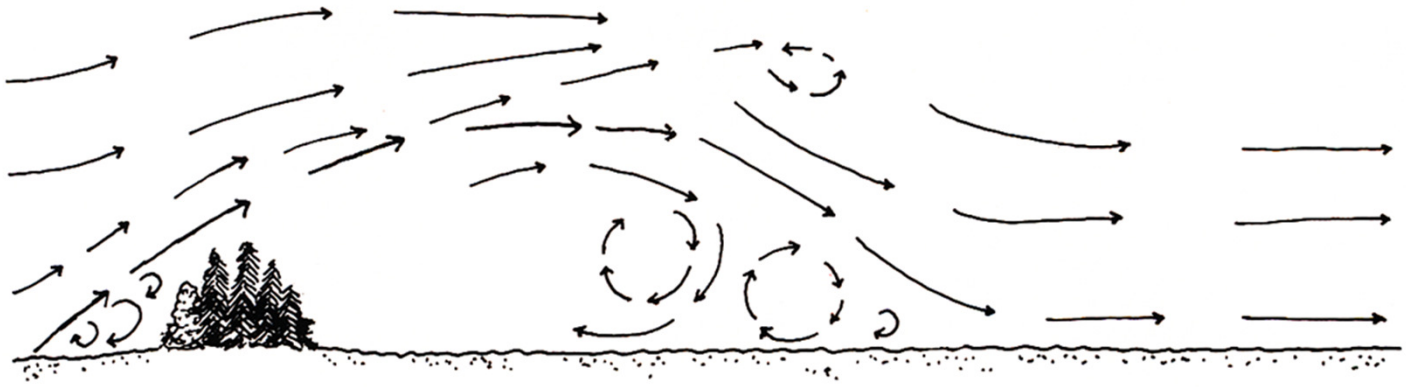
- Virtually impermeable woodland (<40% porosity)
- Reduces wind speed by up to 90%
- Wind speed reduction up to 10 times tree height
- Maximum shelter within 3 to 5 times tree height
- Completely stops wind within small area
- Best for livestock protection
- High turbulence in field



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Shelter Design - Windbreak

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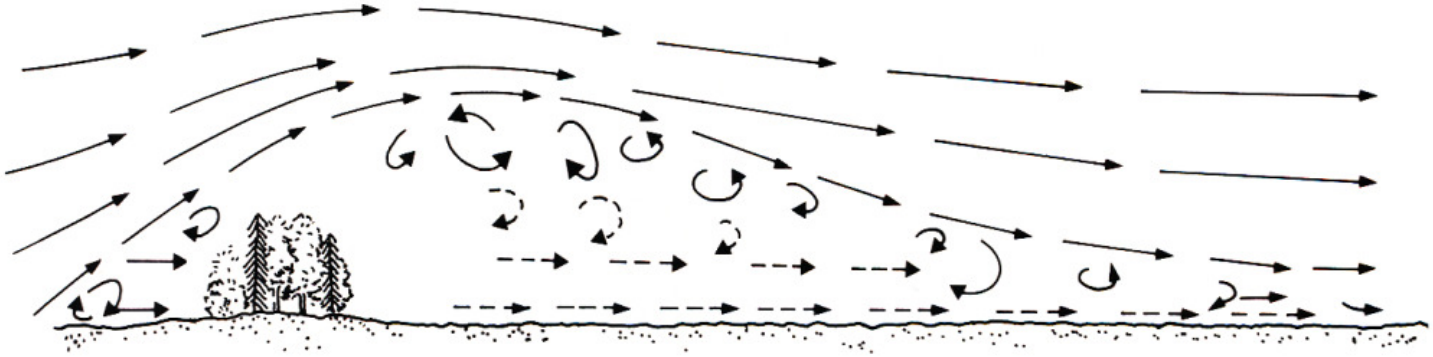
- Permeable woodland (40 – 60% porosity)
- Reduces wind speed by up to 70%
- Wind speed reduction 20 – 30 times tree height
- Achieves reduced wind speeds across large area
- Little turbulence, well above ground
- Best for crops and silage



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Shelter Woods - Existing

- Old and falling apart
  - Clear-fell and replant OR
  - Plant up gaps
- Just old
  - Fell trees to create small gaps in canopy
  - Plant trees in gaps
- Mature conifers
  - Thinning (heavily dependant on tree density and height), becomes more porous
  - Clear-fell and replant BUT loss of shelter (plant new parallel shelterbelt before felling?)

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Shelter Woods - Existing

Shelter Woods - New

- Do you have any shelter, or need more shelter?
- Is it in the right place?
- Type of shelter required?
- Identify marginal ground – is it in the right place?
- Problem winds prevailing or unusual direction?
- Ideal length > 20 times tree height
- Ideal width at least 20m
- North-south orientation minimises shade
- Conifers – need harvested, loss of shelter

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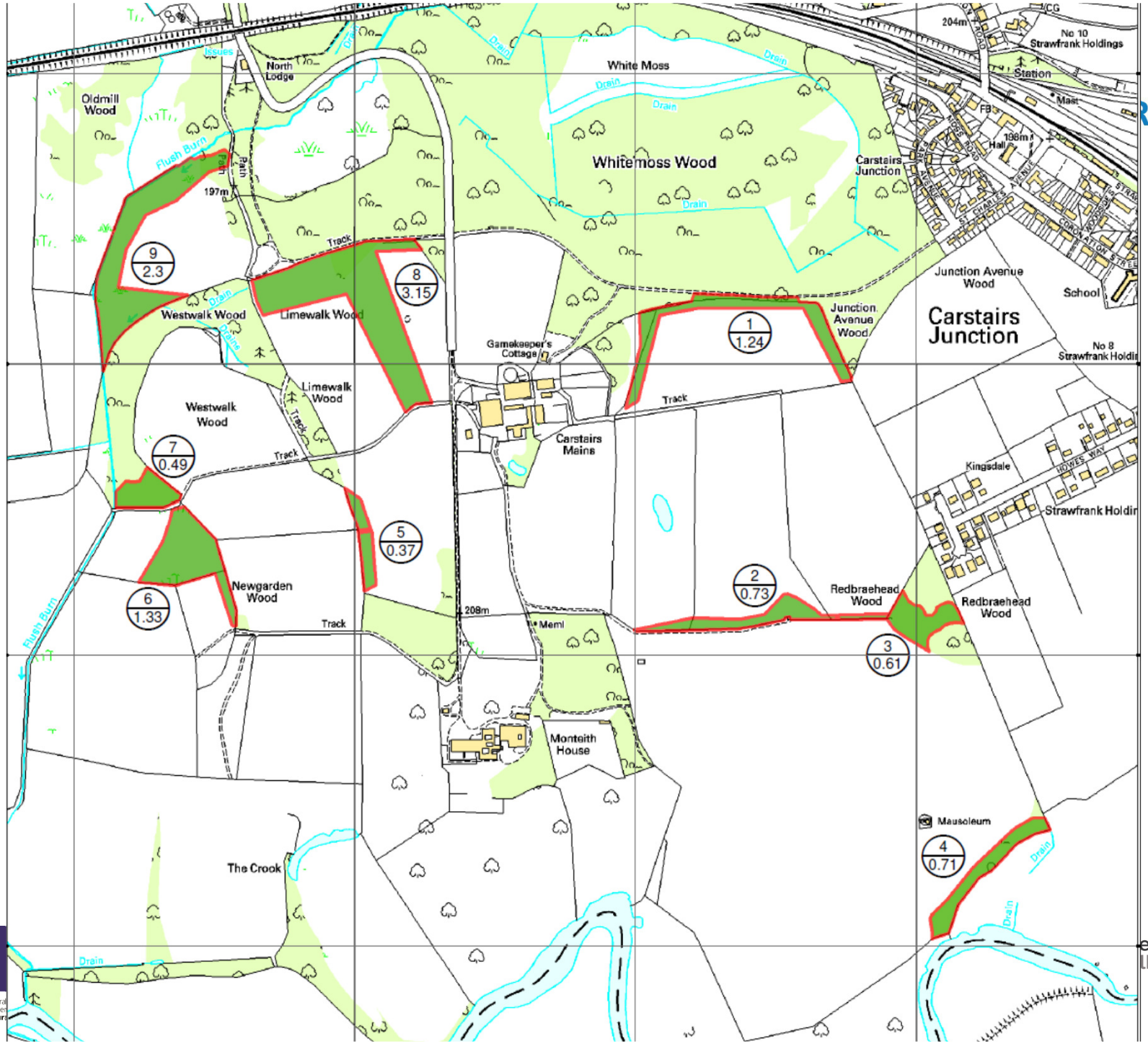

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Shelter Woods - Grants

- Grants for existing woods
  - Restocking grant
  - Other grants viable only at large scale
- Grants available for new planting:
  - Lower density broadleaf grants
  - Higher density conifer grants (min. 2ha woodland block)
  - Maintenance payment for five years
  - Fencing and tube grants
  - BPS retained
  - Got to be sensible about shape and size to be viable

Woodland Grazing - Benefits

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- Shelter from wind
- Overhead shelter (reduced rain and snow)
- Woods retain heat in winter, cool in summer
- *Can* replace need for a shed
- Improved soil nutrition
- Encourage natural regeneration (cattle)
- Timber / firewood income

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Woodland Grazing - Woodland

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- Dense plantation – all shelter, no grazing
- Old shelterbelt, falling apart – all grazing, no shelter
- Conifers – larch, Scots pine
- Broadleaves – birch, oak, ash
- Mixed – combination of above
- Ideally thinned, or group felled
- Young woodland in grant contract – no grazing!!!

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Woodland Grazing - Management

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- Sheep
  - Graze anything, stops natural regeneration
  - If not fed trace nutrients, will strip bark on Scots pine
- Cattle
  - Break up vegetation, helps natural regeneration
  - Can damage buttress roots
- Year-round grazing – low intensity
- Seasonal grazing – higher intensity
- Ideally autumn/winter
- Different breeds, different habits

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Woodland Grazing

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Woodland Grazing - Grants

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- Native woodland (near-native, PAWS)
- Min. 5ha
- Required plans
  - Woodland Management Plan (<100ha)
  - Deer Management Plan
  - Woodland Grazing Plan
- £100/ha for woodland grazing
- Grant for Woodland Grazing Plan
- Grants for fencing, stock handling, feed and water supply

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Woodland Grazing - Grazing

- Low input / low output
- Maximise premium – organic and rare breeds
- Can be difficult to achieve year round grazing on small sites (50-100ha)
- Supplementary feeding required
- Woodland grazing plan
  - Habitat types/condition, constraints
  - Grazing regime:
    - Season
    - Species, breed
    - Stocking density, duration

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Summary

- Shelter woods
  - Wind shield (stop wind, good for livestock)
  - Wind break (slows wind, good for crops)
  - Manage through fell/replant, thin, or group fell
  - Consider long-term when planting woods
- Woodland grazing
  - Overhead shelter, warm in winter, cool in summer
  - Autumn/winter grazing usually preferred
  - Good grants available
  - Grazing management plan

Woodland Creation options

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- Initial Planting: one-off capital payment
- Maintenance – annual £/ha payments for 5 years for weeding, beating up, site maintenance
- Capital Items – fencing, tree protection, bracken control, gorse clearance
- Basic payment for twenty years

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Grant Rates

Normal rates			Rates for target areas		
Initial planting (£/ha)	Annual maintenance payment (£/ha/year) for five years	Total payment rate (£/ha)	Initial planting (£/ha)	Annual maintenance payment (£/ha/year) for five years	Total payment rate (£/ha)
Conifer					
1920	208	2960	2160	234	3330
Diverse Conifer					
2160	336	3840	2430	378	4320
Broadleaves					
2880	528	5520	3240	594	6210
Native Broadleaves					
1840	272	3200	2070	306	3600
Small or Farm Woodland					
2400	400	4400	2700	450	4950

- 12.5% increase for target areas: 'Woodlands for Water', Potential or Preferred areas of local Indicative Forest Strategy

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Thank You

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