Shelterbelts

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Why Shelterbelts?

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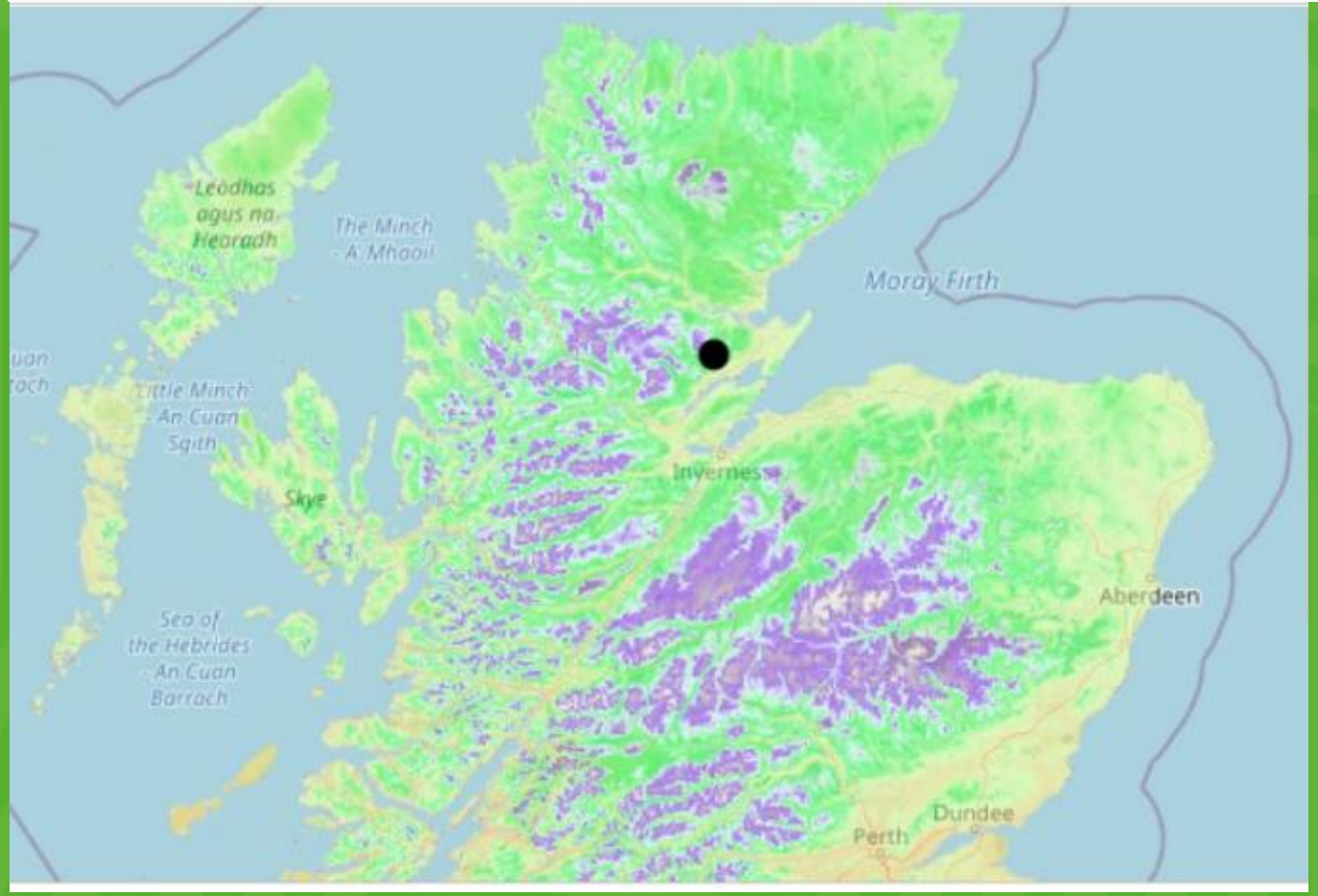
- Reduced Wind Speeds
- Reduced Evapotranspiration
- Reduced evaporative chilling of livestock
- Reduced ewe mortality following shearing
- Reduced feed costs
- Reduced Soil Erosion
- Improved Lamb Survival
- Improved Weight Gain
- Improved Milk Yields
- Improved Animal Welfare
- Improved Flood Prevention/Soil Stability
- Improved Biosecurity
- Screening of Farm, Livestock, & Buildings

Location



- Thinking about your own unit, what are your soils, your growing conditions, your weather, and your particular challenges faced?
- What are your primary objectives for planting, and where would planting a shelterbelt integrate well with your existing operations/target future operations?
- Where are you planting?
- Why are YOU planting?
- What are you planting?

Design

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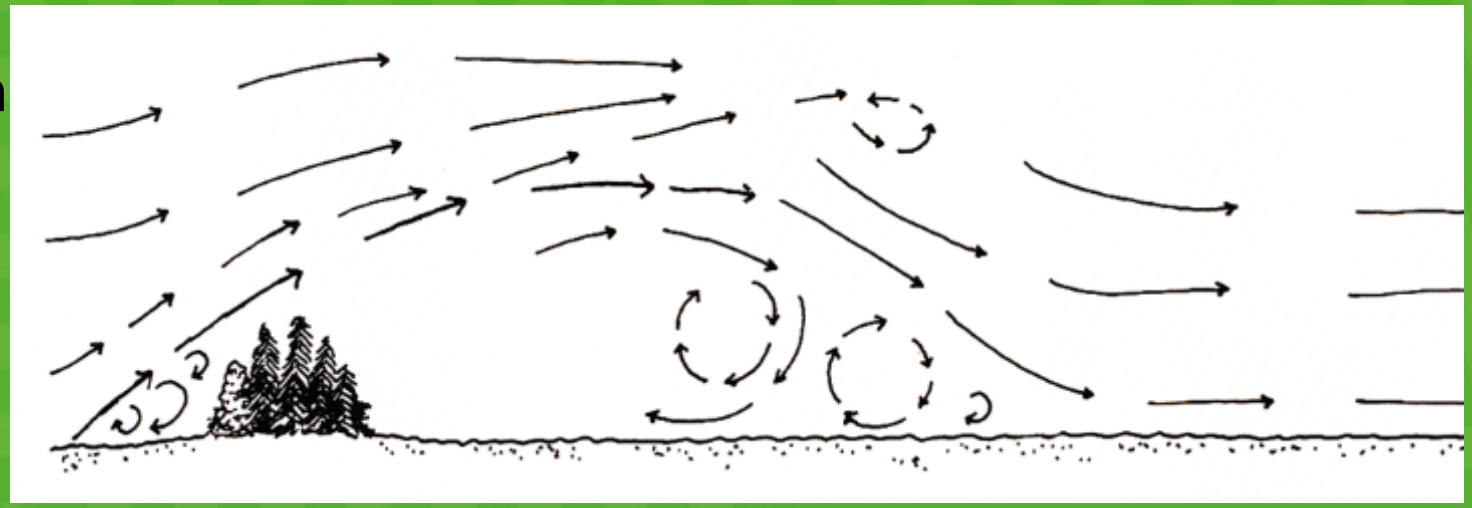
- Intended Purpose?
- Windshield- Livestock Protection
  - Virtually Impermeable Woodland (<40% porosity)
  - Reduces Windspeed by up to 90%
  - Wind speed reduction up to 10 times tree height
  - Maximum shelter within 3 to 5 times tree height
  - Completely stops wind within small area
  - Best for livestock protection
  - High turbulence patterns in field



Design

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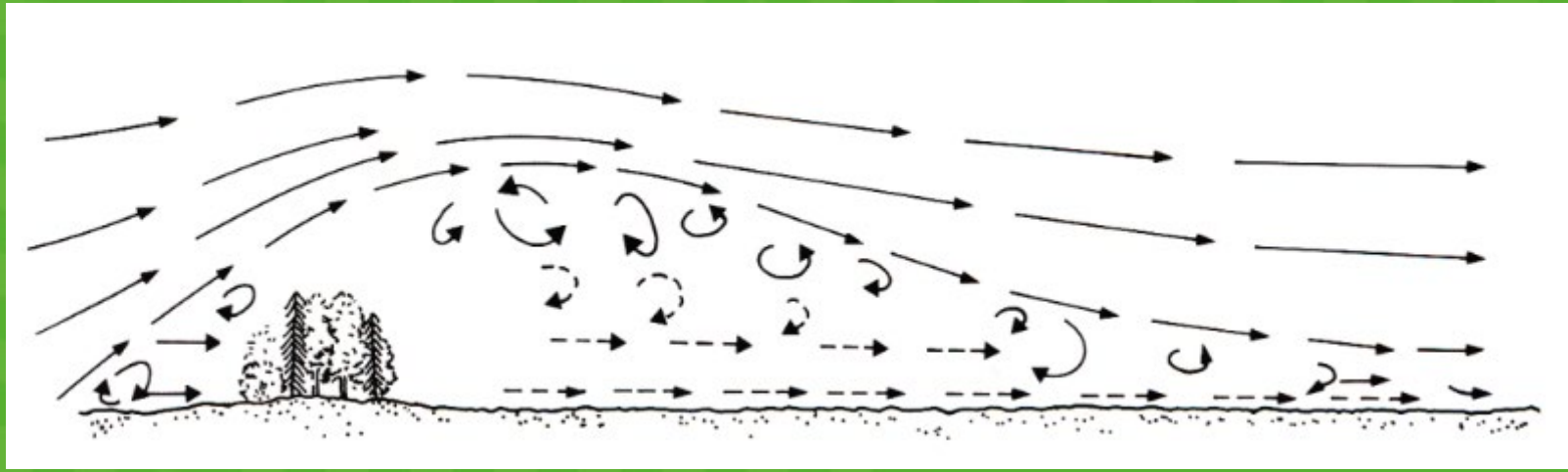
- Intended Purpose?
  - Permeable Woodland- Arable Protection
    - 40- 60% porosity
- Reduces wind speed by up to 70%
- Wind speed reduction 20 – 30 times tree height
- Achieves reduced wind speeds across large area
- Little turbulence, well above ground
- Best for crops and silage



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Species

- Tailor your species choice to your site conditions, objectives, and grant model requirements.
- Plant the right tree, in the right place, for the right reason.

Porosity

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Size

- What area is potentially available to plant?
- What is your minimum size for grant requirements?
- Ideal width is at least 20 metres
- Too many individual variables to dictate an “optimum” size or length- be guided by what works for you & your business, fit the woodland around what is important for you.

Shape & Orientation

- What is the main wind direction?
- Are there any natural features such as watercourses to follow?
- What land is available for planting?
- Maximise planting area, minimise fence length (if fencing).
- North–South minimises shade, but might not suit wind conditions on your site

Shape & Orientation

- Maximise planting area by rounding off field corners- try make improvements for future livestock herding, biosecurity and landscape at same time
- If possible, link shelterbelts across multiple fields and using different orientations to maximise shelter and benefits

Other Factors to Consider

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- Grant Contract Requirements
- Maintenance
- Initial costs
- Threats
- Access requirements- now and future
- Permanent Feature
- Carbon
- Safety

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