NICHOLSONS

Herbicide Reduction

POLICY

2026

Created by Mark Nathanson, Woodland Manager

REVISIONS

Approval

	Name	Signature	Position	Date
Prepared by	Mark Nathanson	MWN	Woodland Manager	05.03.2026
Reviewed by	Nicholsons Forestry Dept			05.03.2026
Approved by	Liz Nicholson + CANI Committee		Managing Director	05.03.2026

Amendment Record

Page No.	Context	Person	Date

CONTENTS

1. Purpose

This document has been generated following internal concerns about the negative environmental effects of glyphosate. Its content is derived from input, debate and consensus across the Forestry department. The overarching ambition is to reduce the use of glyphosate and other herbicides where possible.

2. General consensus

- The team broadly supports reducing all chemical use, not just glyphosate.
- Glyphosate has been singled out in discussion, though many other pesticides have similar or greater environmental impacts.
- Any reduction in herbicide use must be weighed against tree survival, growth rates, and long-term costs.

3. Observations on Glyphosate use

- Forestry uses glyphosate very selectively compared to agriculture: spot-spraying around individual trees (e.g., 1m² per tree at 1,600 trees/ha = 16% of area).
- Typical forestry rates are low dose (~0.48 L product per hectare).
- Targeted glyphosate use has been shown to improve survival and early growth, particularly on challenging soils or restock sites.
- Herbicide application beyond year 3 may not always be required; spots can be reduced as trees mature.

4. Herbicides vs alternatives

a. Mechanical methods / mowing / cultivation

- Inter-row cutting / mowing without herbicide use is an ineffective form of weed control. However, in conjunction with targeted herbicide use early on in establishment, it can provide benefits.

- Mechanical patch mounding or screefing may reduce early herbicide use in large-scale planting, though site-specific suitability and soil carbon release are key considerations

b. Mulch mats

- Mixed experience:
    - Biodegradable mats can break down too quickly and may require backup herbicide applications.
    - Non-biodegradable mats can be effective long-term but involve plastic, disposal, and may attract vole damage.
    - Larger sized mats may reduce weed competition but can be expensive relative to benefit. Small mats have little effect.

c. Cover crops / grass leys / soil additives

- Low-competition fescue mixes (e.g., Beetle Bank AB3) can reduce weed competition, especially if sown pre-planting.
- Herbal leys or higher vigour mixes, whilst great for soil improvement, will compete with young trees and require significant additional weed control.
- Soil ameliorants + mycorrhizal products can enhance growth and survival rates, reducing need for herbicide interventions.

5. Site-specific considerations

- Woodland creation sites: Provide more opportunities to reduce herbicide through pre-planting vegetation management, mulching, cover crops, and mechanical control.
- Restock sites: More difficult due to established vegetation and seed banks; herbicide often remains necessary.
- Deer fencing may result in increased vegetation growth, raising herbicide requirements.

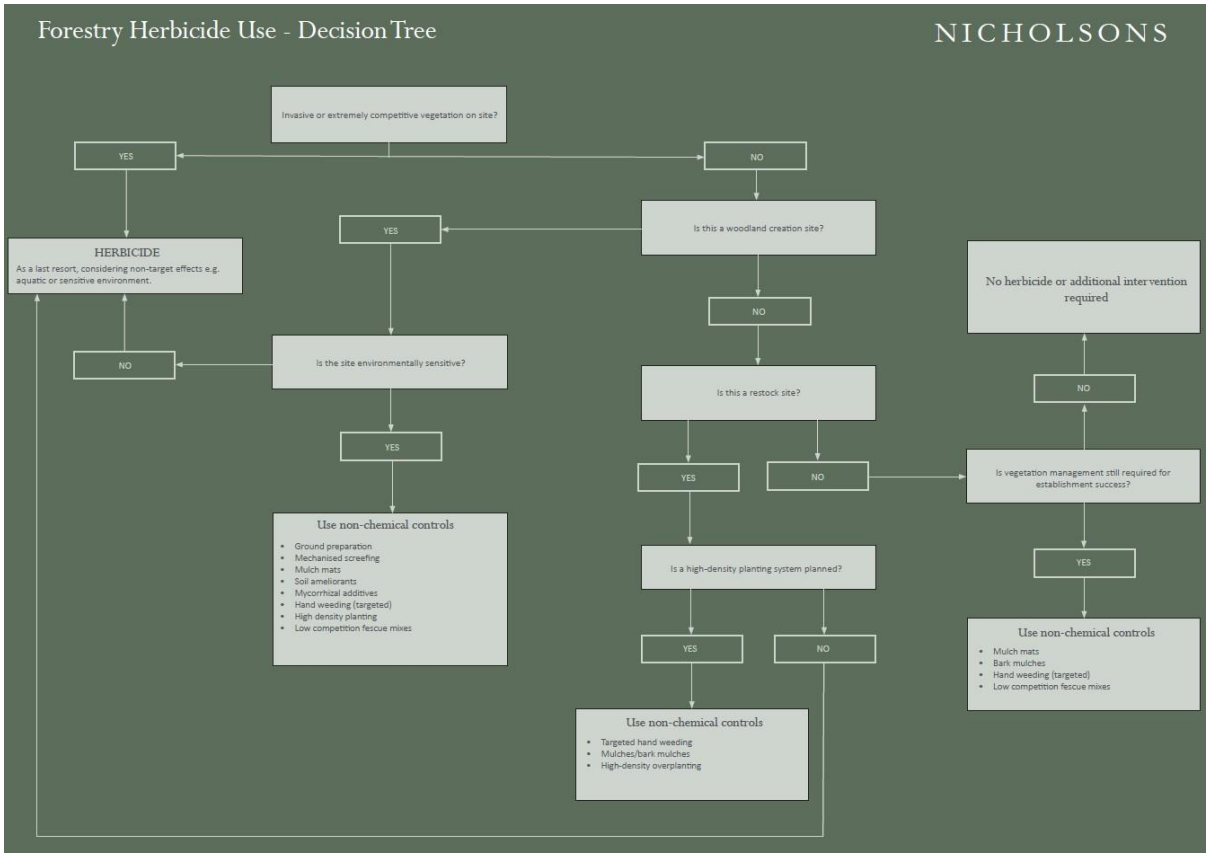
6. Environmental and carbon considerations

- Bare soil and cultivation can negatively impact soil moisture and carbon storage.
- Mulch mats and mechanical methods may reduce herbicide input but involve increased resource use, potential carbon cost, and labour.
- Reduction in early growth due to under-managed weeds may negatively impact carbon sequestration forecasts and long-term woodland health.

7. Summary

- Glyphosate remains an effective tool, especially for restock sites and during the first 1-3 years post-planting.
- Herbicide reduction is possible (see checklist on p4), especially on woodland creation sites, through intelligent pre-planting management, and a targeted herbicide application rather than a broad-brush prescription.
- Complete elimination of herbicides, or over-reliance on alternative methods (mulch mats, leys, mechanical) may backfire in cost, labour, or survival rates.
- The debate is not black-and-white: the optimal approach is **site-specific, flexible, and evidence-driven**, combining minimal herbicide with other low-impact interventions wherever possible.

Appendix 1: Decision Tree – Reducing Forestry Herbicide usage


Forestry Herbicide Use - Decision Tree
NICHOLSONS
Invasive or extremely competitive vegetation on site?
YES
NO
HERBICIDE
As a last resort, considering non-target effects e.g. aquatic or sensitive environment.
YES
Is this a woodland creation site?
NO
No herbicide or additional intervention required
NO
Is the site environmentally sensitive?
Is this a restock site?
NO
YES
YES
NO
Is vegetation management still required for establishment success?
YES
Use non-chemical controls
Ground preparation
Mechanised screefing
Mulch mats
Soil ameliorants
Mycorrhizal additives
Hand weeding (targeted)
High density planting
Low competition fescue mixes
Is a high-density planting system planned?
YES
NO
Use non-chemical controls
Mulch mats
Bark mulches
Hand weeding (targeted)
Low competition fescue mixes
Use non-chemical controls
Targeted hand weeding
Mulches/bark mulches
High-density overplanting

Appendix 2: Checklist for reducing Forestry herbicide use

1. Assessment & Planning

- Conduct annual site-specific weed assessments, rather than automatic sprays.
- Prioritize treatment only for weeds that significantly and detrimentally compete with young trees.
- Consider reducing spot size around trees (e.g., $1m^2 \rightarrow 0.8m^2$) where practical; or reducing glyphosate mix to minimum on product label.
- Once plantations have established, limit herbicide use to vulnerable or unguarded trees.

2. Timing & Application

- Limit planning for herbicide application to 1 per year, with a second only if necessary.
- Consider skipping herbicide beyond year 3, contingent on tree establishment.

3. Vegetation Management Alternatives

- Mechanical methods:
    - Inter-row mowing (only in conjunction with herbicide)
    - Targeted manual weeding for small-scale sites and deleterious, shallow rooting weeds
- Maintain ground cover using selected low competition grass/fescue mixes. Avoid high competition cover crops and herbal leys.

4. Mulches & Mats

- Consider mulch mats to reduce weeds, but account for:
    - Damage by voles or wildlife
    - Plastic pollution issues
    - Limited efficacy unless installed with ground preparation, maintenance, and of an adequate size ($1m^2$)
- Explore loose mulch (bark, woodchip) on appropriate large-scale woodland creation or high-value sites.

5. Soil & Plant Health

- Early planting to give trees strong root growth before Spring.
- Use mycorrhizal additives where appropriate to support establishment.

6. Cost & Environmental Considerations

- Compare both financial and carbon costs: herbicide vs. labour-intensive alternatives (e.g. hand weeding, mulching).
- Consider proximity to sensitive environmental sites and waterways, and appropriate buffer zones.
- Factor in deer control and fencing: areas with less browsing may require more weed control.

Checklist for reducing herbicide use in Forestry

NICHOLSONS

Plan

Consider the proximity to waterways and sensitive environmental sites.

Limit planning to one application of herbicide per year.

Consider omitting herbicides beyond Year Three.

Maintain low competition ground cover using grass/fescue mix.

Areas with deer fencing and deer control may require more weed control.

Plant

Use mychorrizal additives where appropriate.

Consider biodegradable mulch mats.

Use of woodchip on appropriate large scale sites.

Plant early to give trees strong root growth before spring.

Assess

Annual site specific weed assessments rather than automatic prescription.

Prioritise herbicide use on detrimentally competitive weeds.

Consider reducing spot size (1m² --> 0.8m²).

Consider reducing herbicide dilution rate to the minimum recommended on the manufacturers' product label.

Limit use to vulnerable or unguarded trees as plantations mature.

Interrow mowing and manual weeding (in conjunction with herbicide).