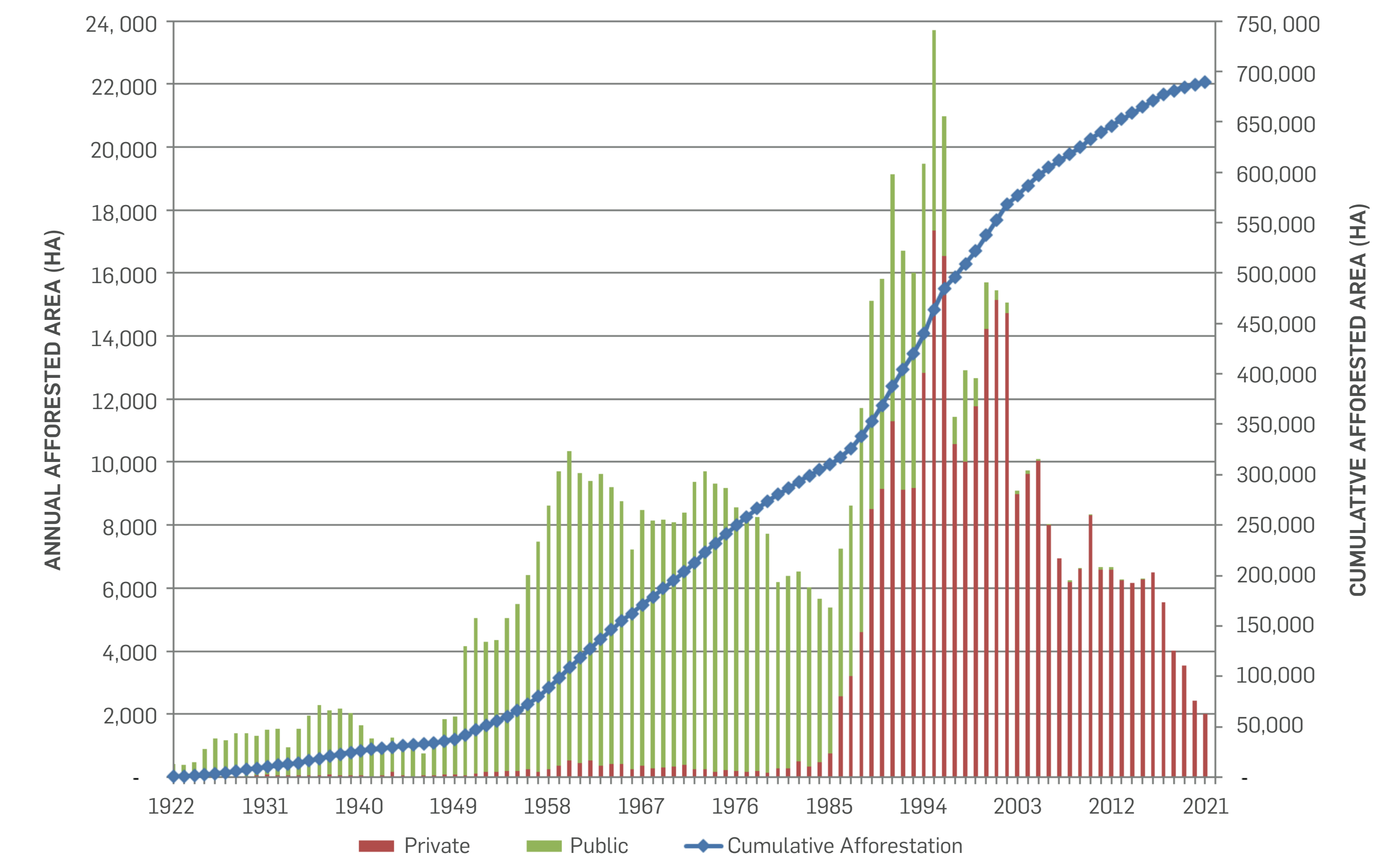


# Afforestation in Ireland

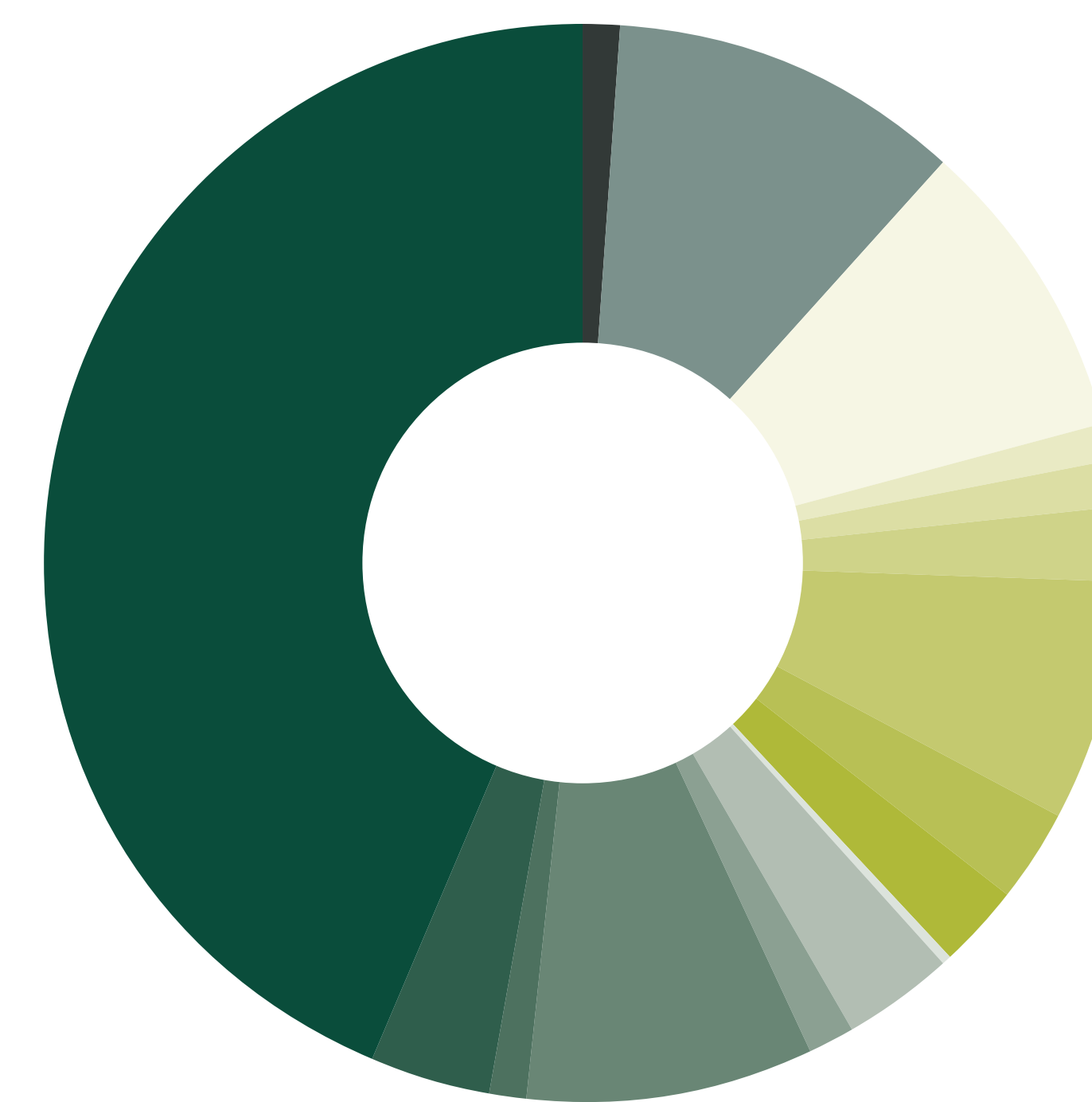


## Annual State and Private Afforestation (1922–2021)



Adapted from Forest Statistics – Ireland 2022

## Composition of the total forest area



Sitka spruce	44.6%	Oak	2.5%
Norway spruce	3.8%	Ash	3%
Scots pine	1.2%	Birch species	7.2%
Other pine species	8.8%	Alder species	2.4%
Douglas fir	1.3%	Sycamore	1.3%
Larch species	3.3%	Beech	1.3%
Other conifers	0.4%	Other broadleaves	9.2%
		Forest open area	10.9%
		Temporarily unstocked	0.9%

Adapted from Forest Statistics – Ireland 2022

## Forest Creation Intervention – Forestry Programme 2023–2027\*

FOREST TYPE	GRANT / HA	ANNUAL PREMIUM / HA
FT1 Native forests	€6,744	€1,103
FT2 Forests for water	€6,744	€1,142
FT3 Forests on Public Lands	€11,044	n/a
FT4 Neighbourwoods	€10,200	€1,142
FT5 Emergent Woodland/rewilding	€2,500	€350
FT6 Broadleaf, mainly oak	€6,744	€1,037
FT7 Broadleaf, mainly birch, alder	€4,314	€973
FT8 Agroforestry	€8,555	€975
FT9 Seed Orchards	€10,000	€1,142
FT10 CCF	€5,421	€912
FT11 Mixed high forests: conifer, 20% broadleaves	€4,452	€863
FT12 Mixed high forests with mainly spruce, 20% broadleaves	€3,858	€746

\*Subject to state-aid approval by EU



# Transformation to CCF: Government supports



## Woodland improvement CCF Scheme

### BACKGROUND

**2018:** Pilot scheme

**2020:** General application

**600ha** has been approved to date

### FOREST OPERATIONS SUPPORTED

Transformation  
management plan

Inventory

Tree marking

Selective felling for  
crown development  
and transformation

High pruning

Management of natural  
regeneration

Deer management

Enrichment planting

Forest protection  
(fencing, tree guards etc)

Clearance of invasive species

Protection of ecosystems

Woodland edge management

Maintenance of open spaces,  
rides and glades

## Forestry Programme 2023–2027

### INTERVENTION 2

Forest creation

### INTERVENTION 5

Sustainable forest management

### INTERVENTION 8

Climate resilient reforestation

### FIXED GRANT – €/HA

**First Intervention** €1,200

**Second Intervention** €1,200

**Third Intervention** €1,200

**Payment for Ecosystem Services** €150



# Ballycullen Forest County Wicklow

A long-term study of transformation to Continuous Cover Forestry in Sitka spruce in Ireland

**Owners** Sandra and Lasse Jorgensen



## Project Features

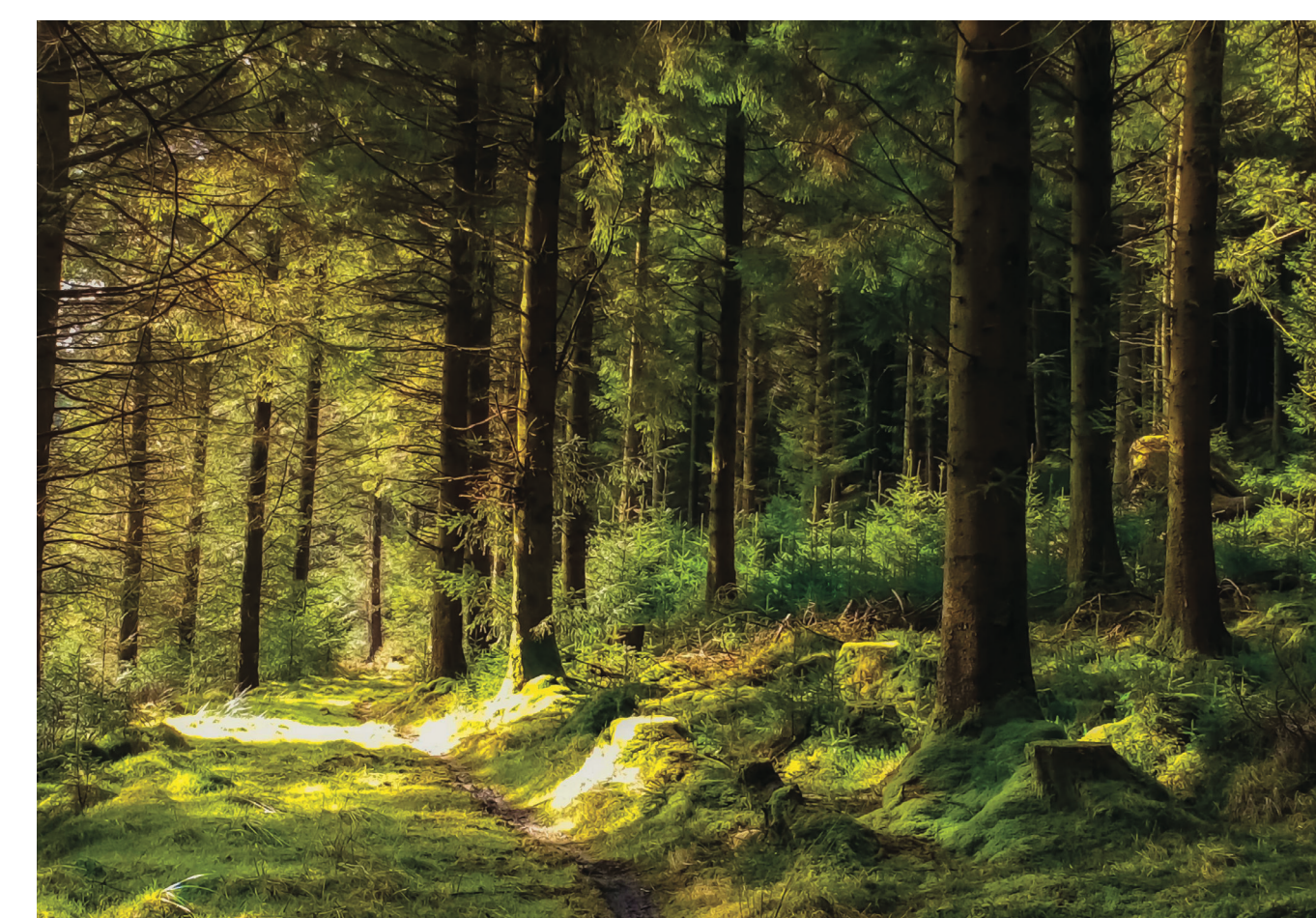
Initiated in 2010, this is currently the most important study of stand transformation in Sitka spruce.

**COMPARISON OF THREE THINNING TREATMENTS**  
Low (Standard)  
Crown  
Graduated Density

**STAND INTERVENTIONS**  
T1 – 2011  
T2 – 2014  
T3 – 2018/19  
T4 – 2023

**DESIGN**  
2 forests  
3 blocks per forest  
3 treatments per block

**FOCUS**  
Tree marking  
Forest stand dynamics  
Timber production  
Timber quality



Mature stand showing potential for natural regeneration



Early stage interventions to promote stability and irregular stand structures

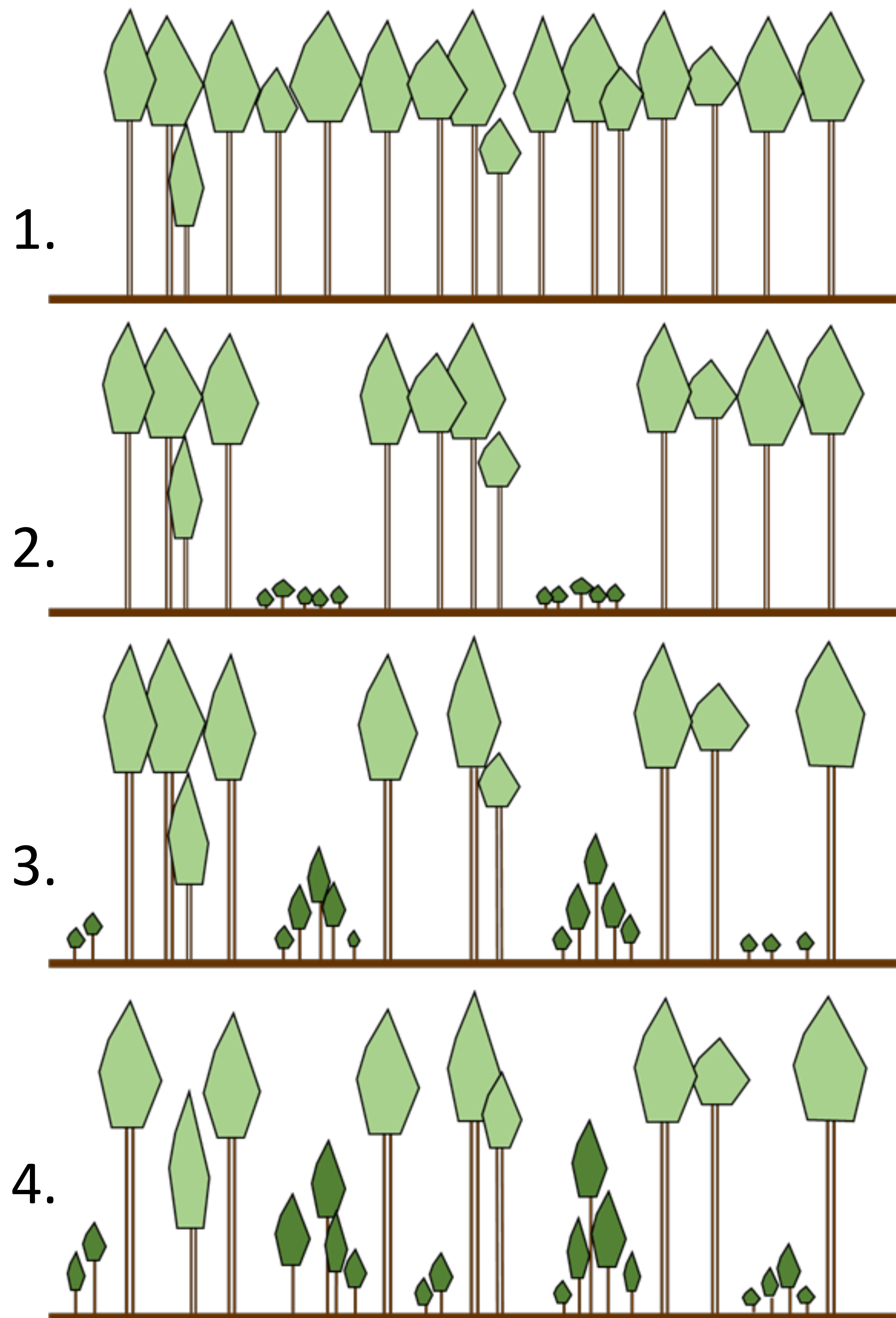


Selecting potential quality trees in the Crown thinning treatment

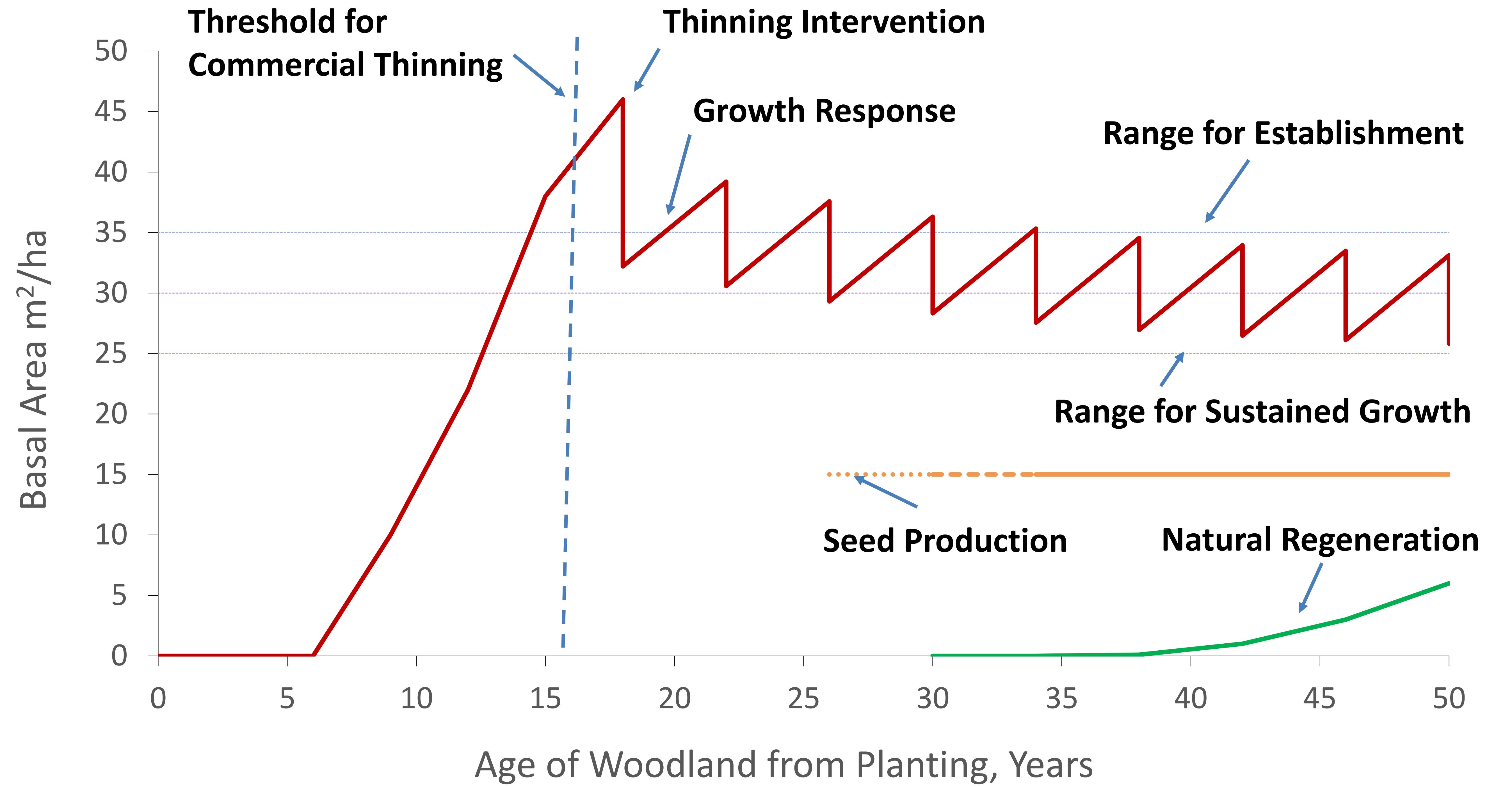


# Stand Transformation

1. Differentiation
2. Promoting Regeneration
3. Structural Development
4. Structure Achievement

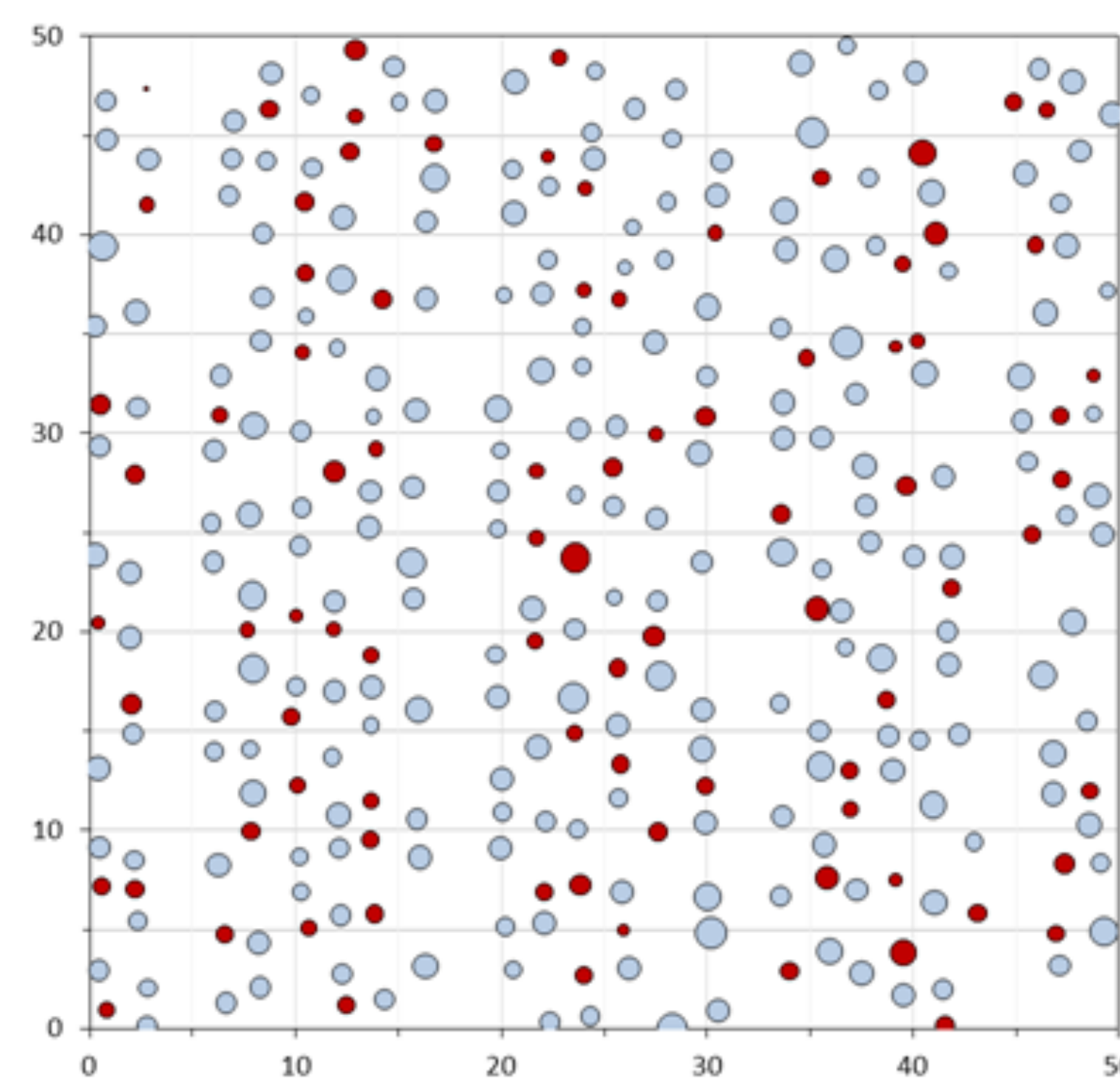


# Conceptual Model

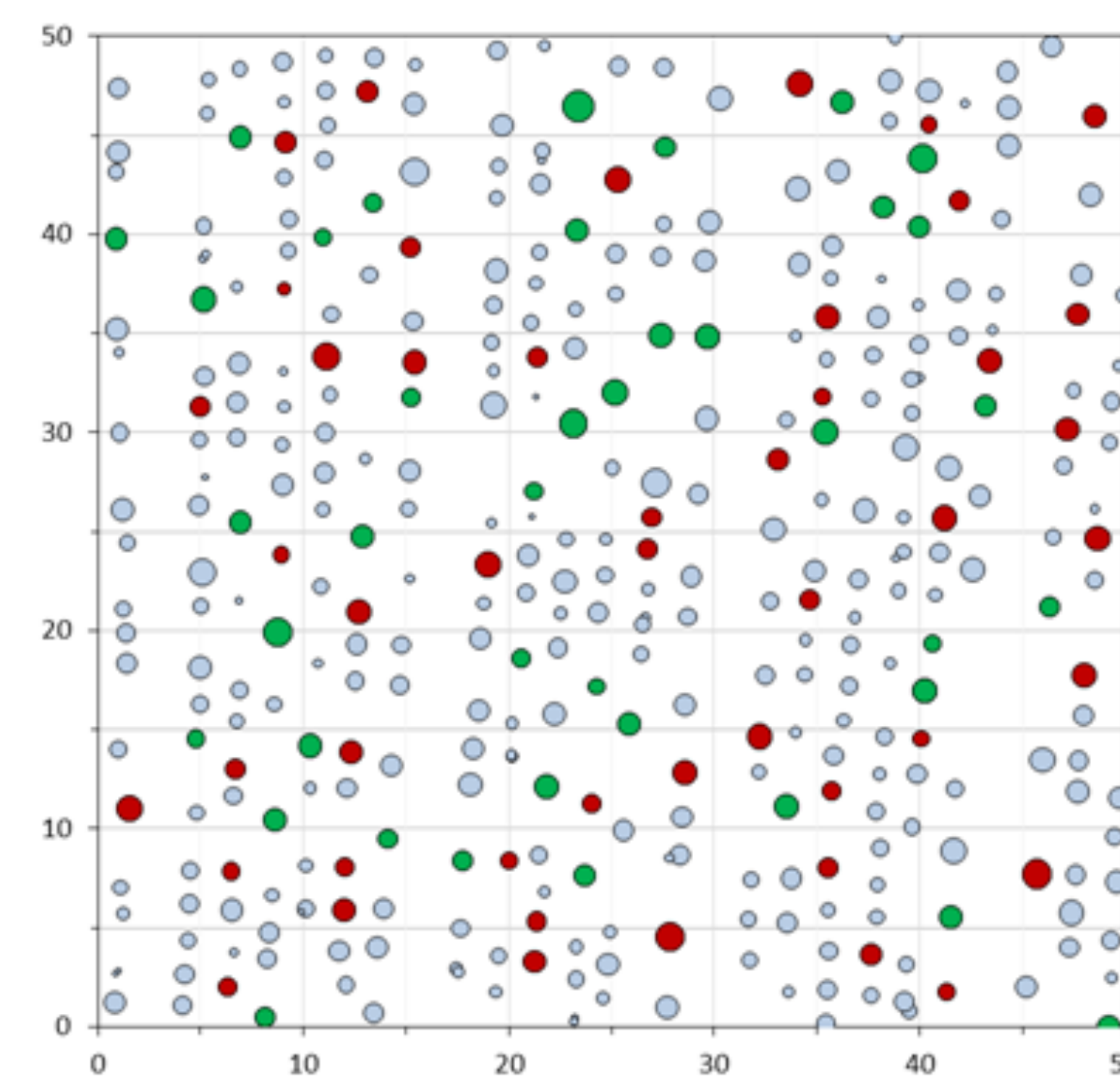


# Marking Patterns

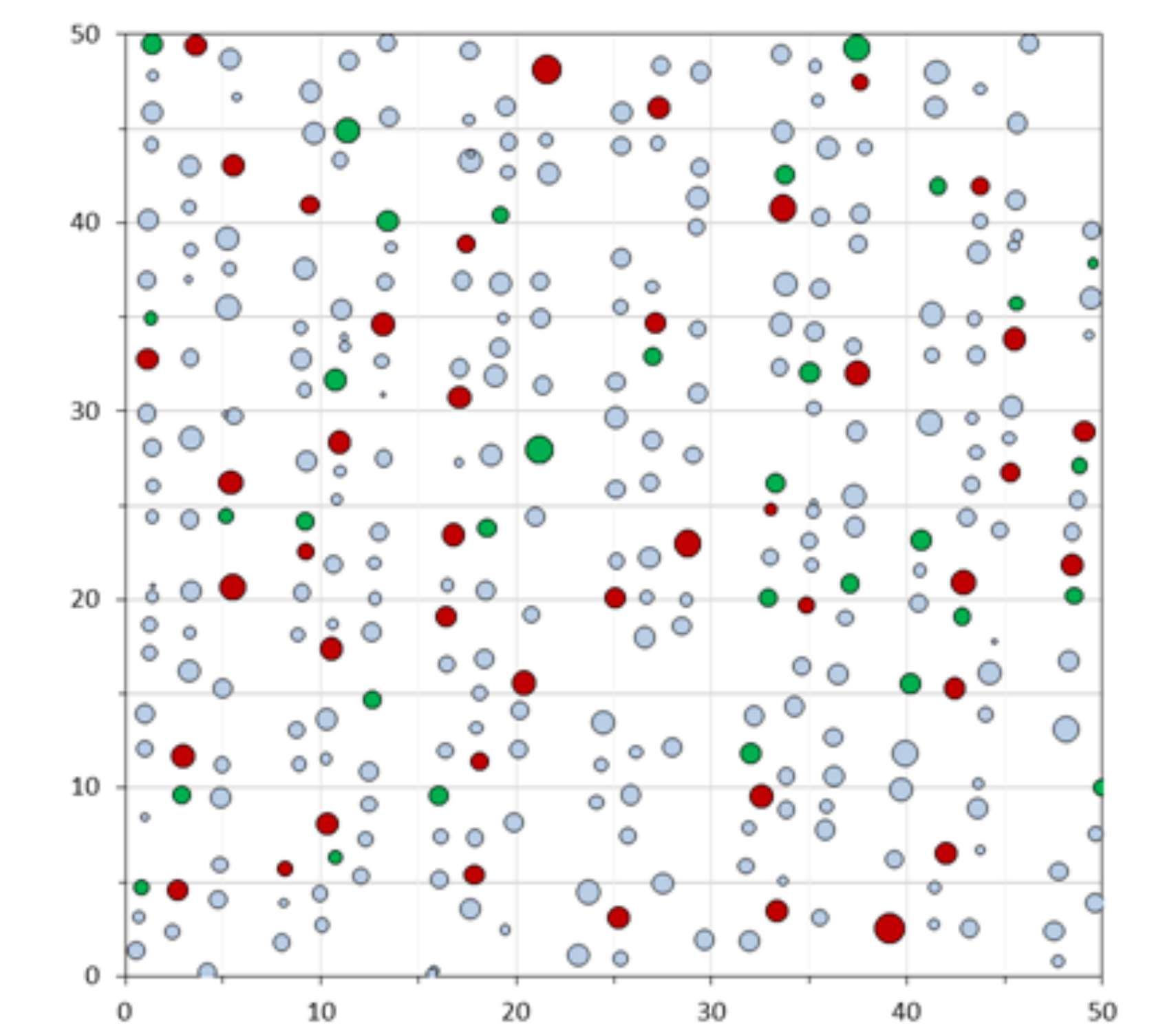
1. Low thinning



2. Crown thinning



3. GD thinning



● Size class 1 ● Size class 2 ● Size class 3 ● Size class 4

Tree size class

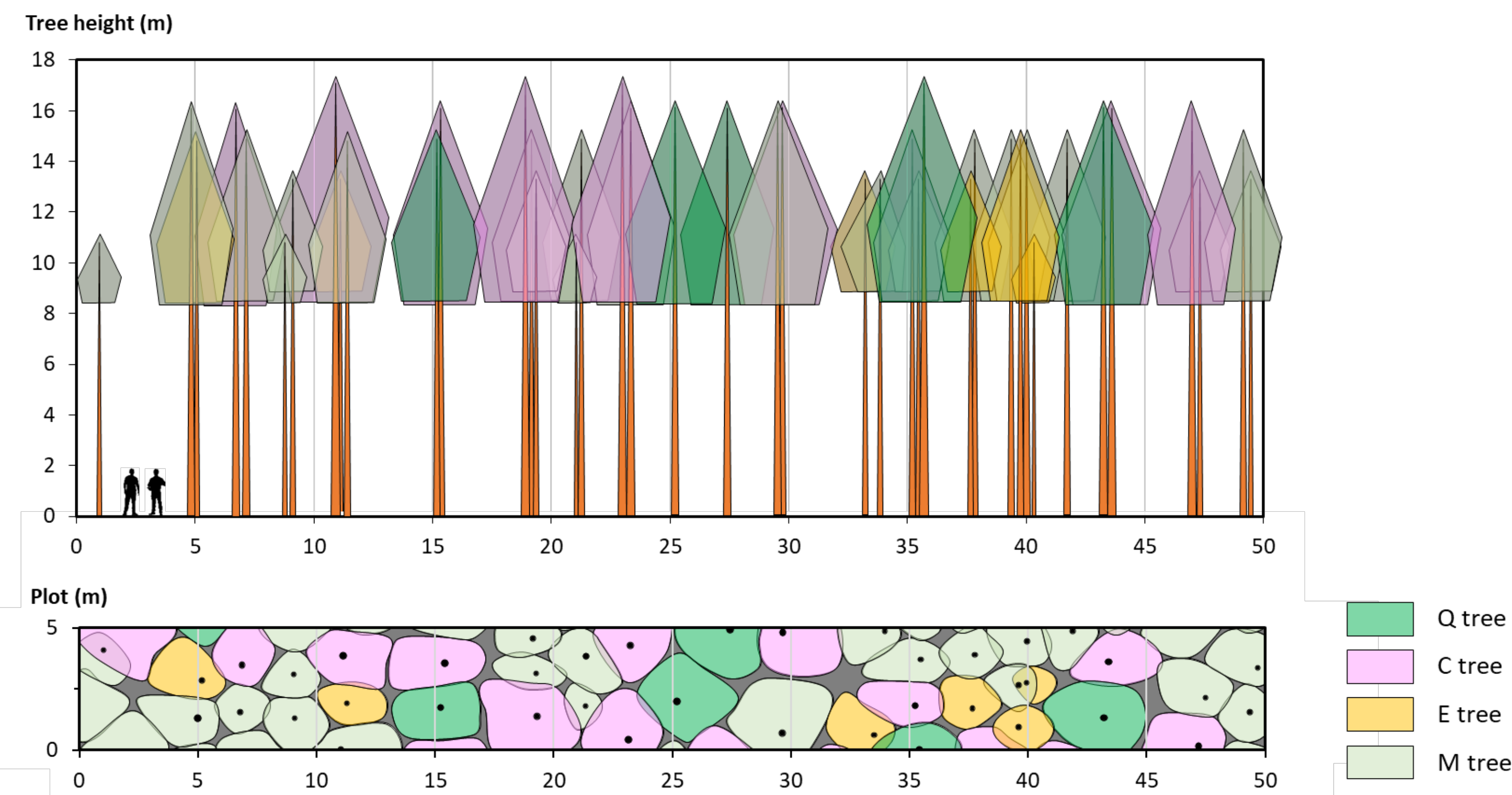
● Standing trees ● Marked trees ● Q-trees

Tree marking class

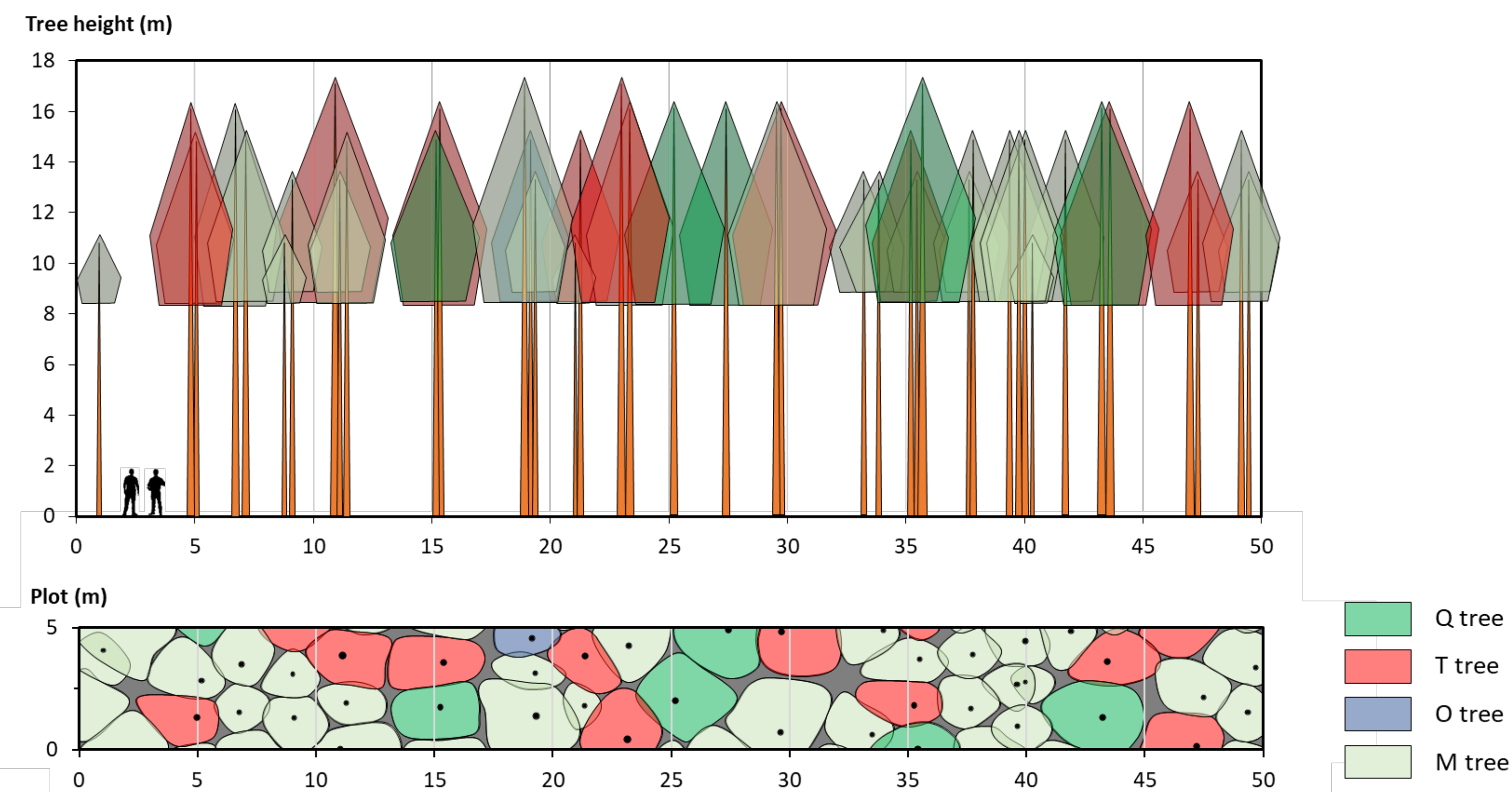


# Tree Marking

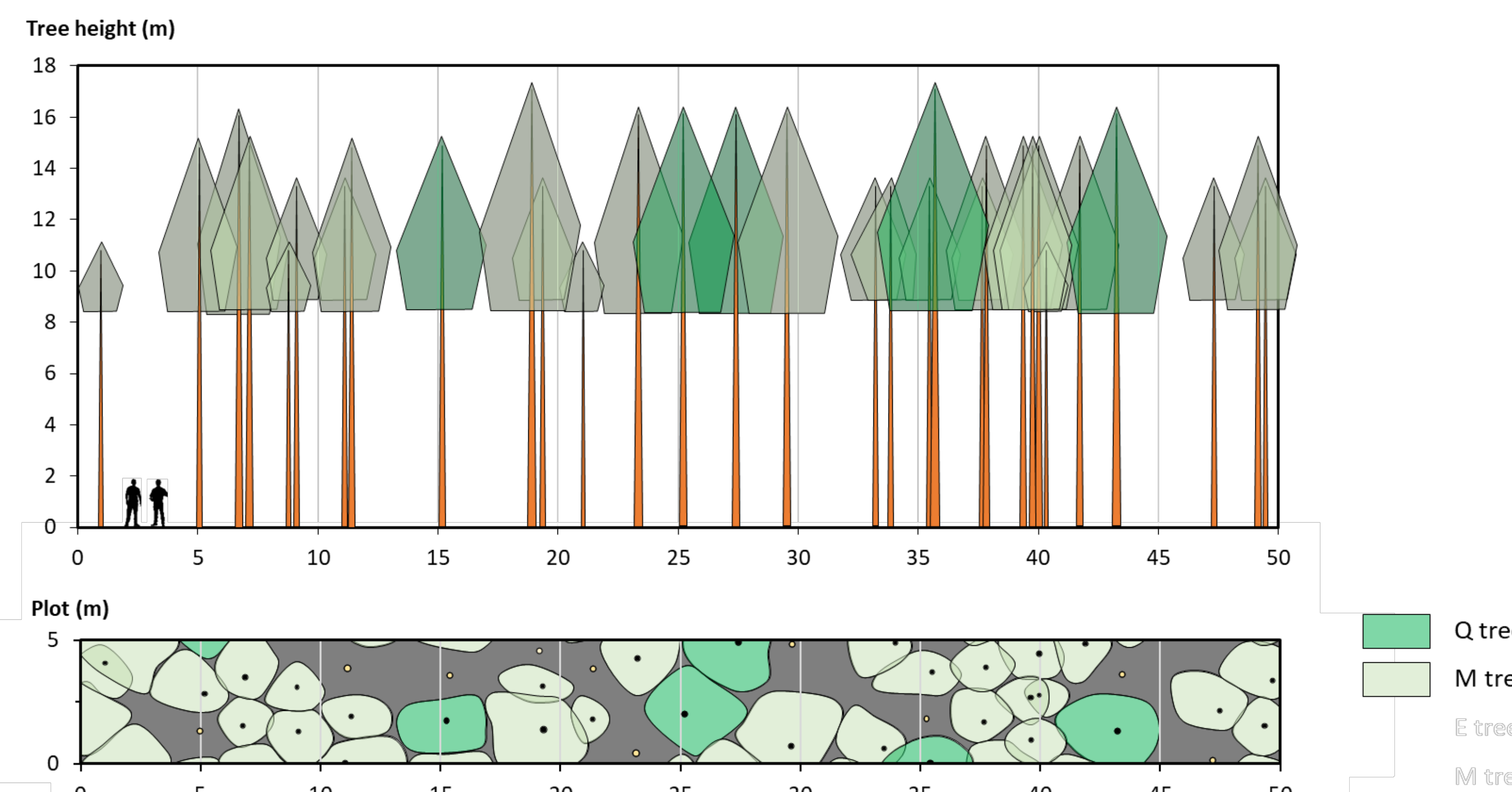
## Designation



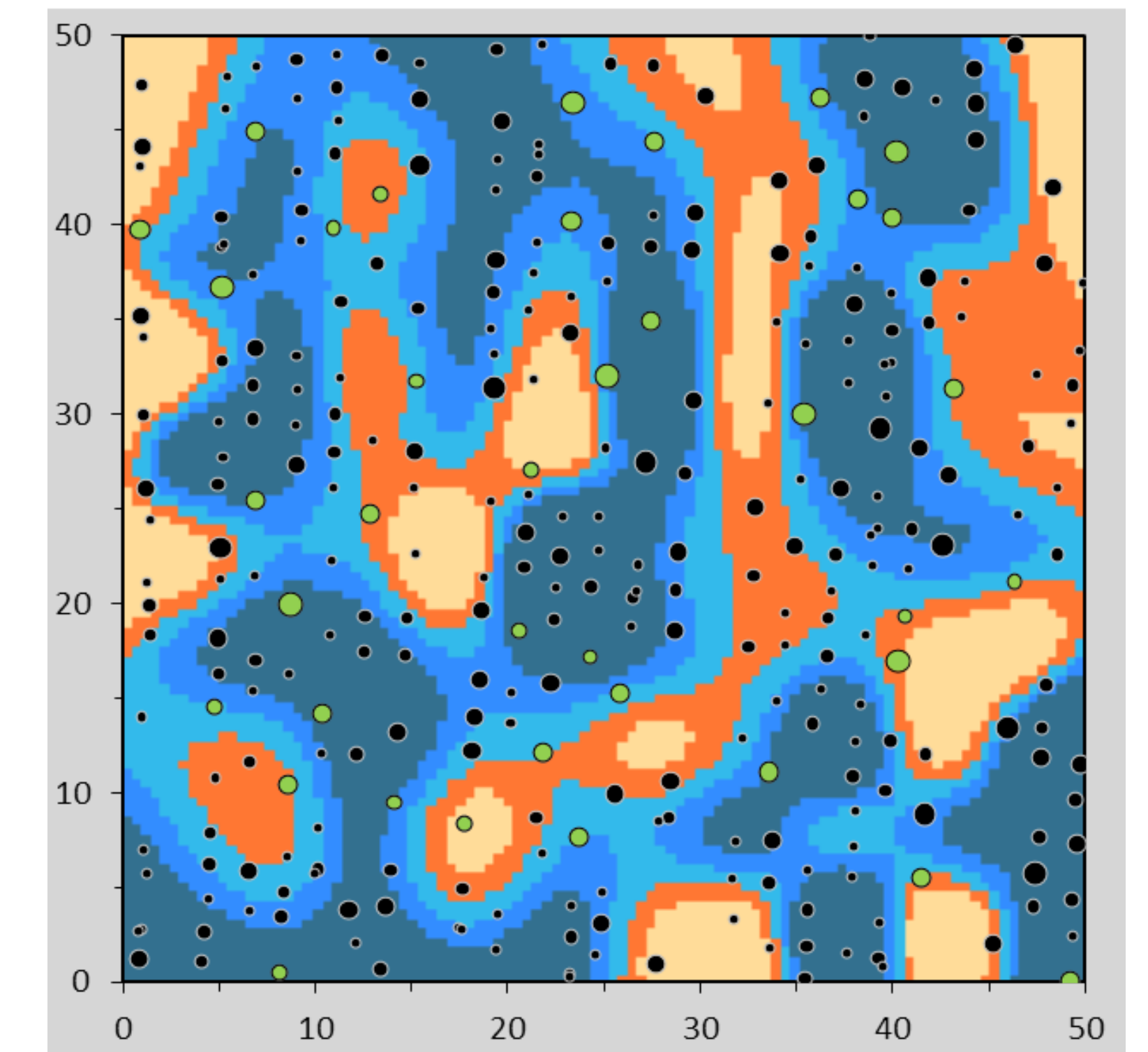
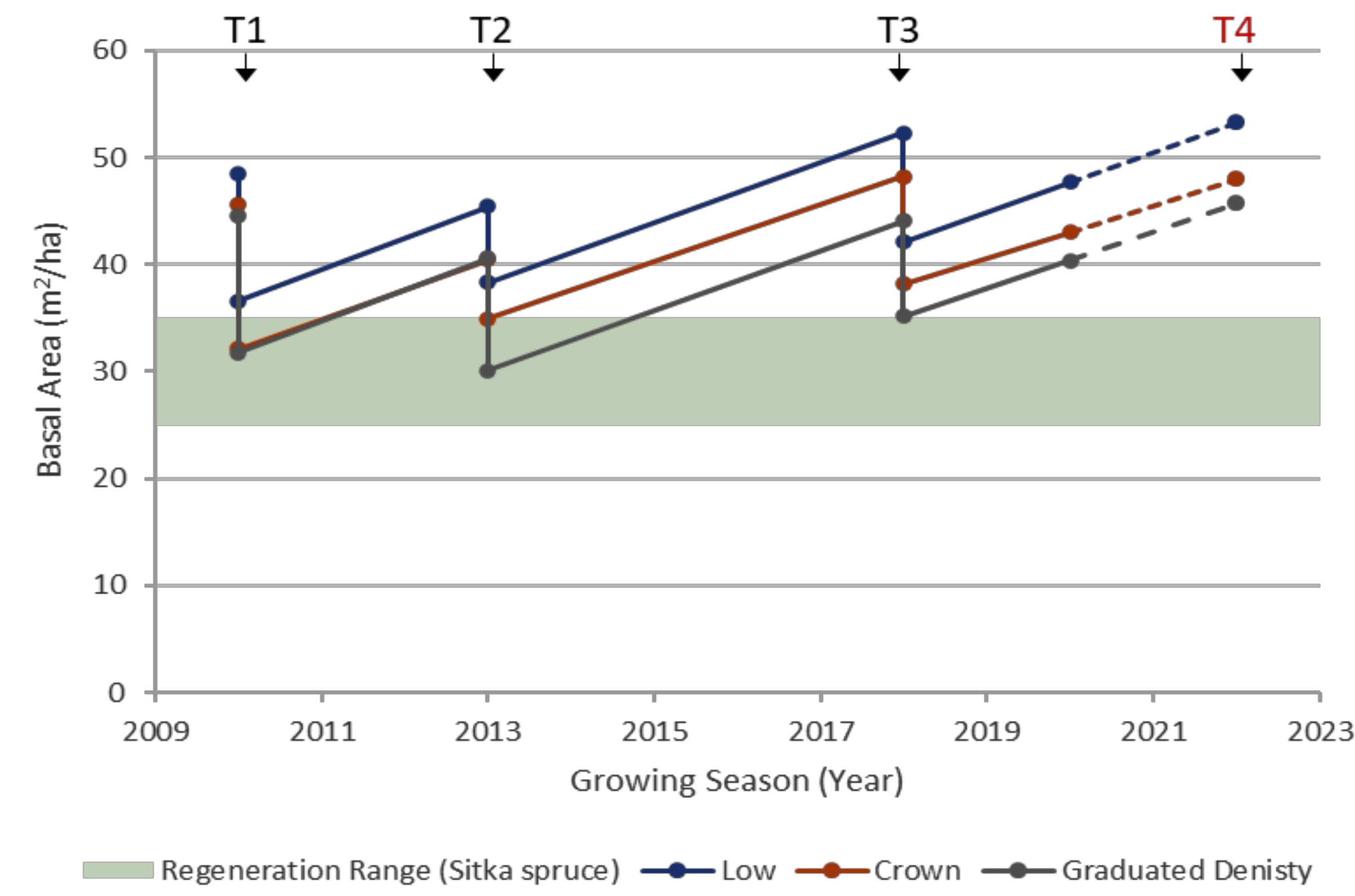
## Marking



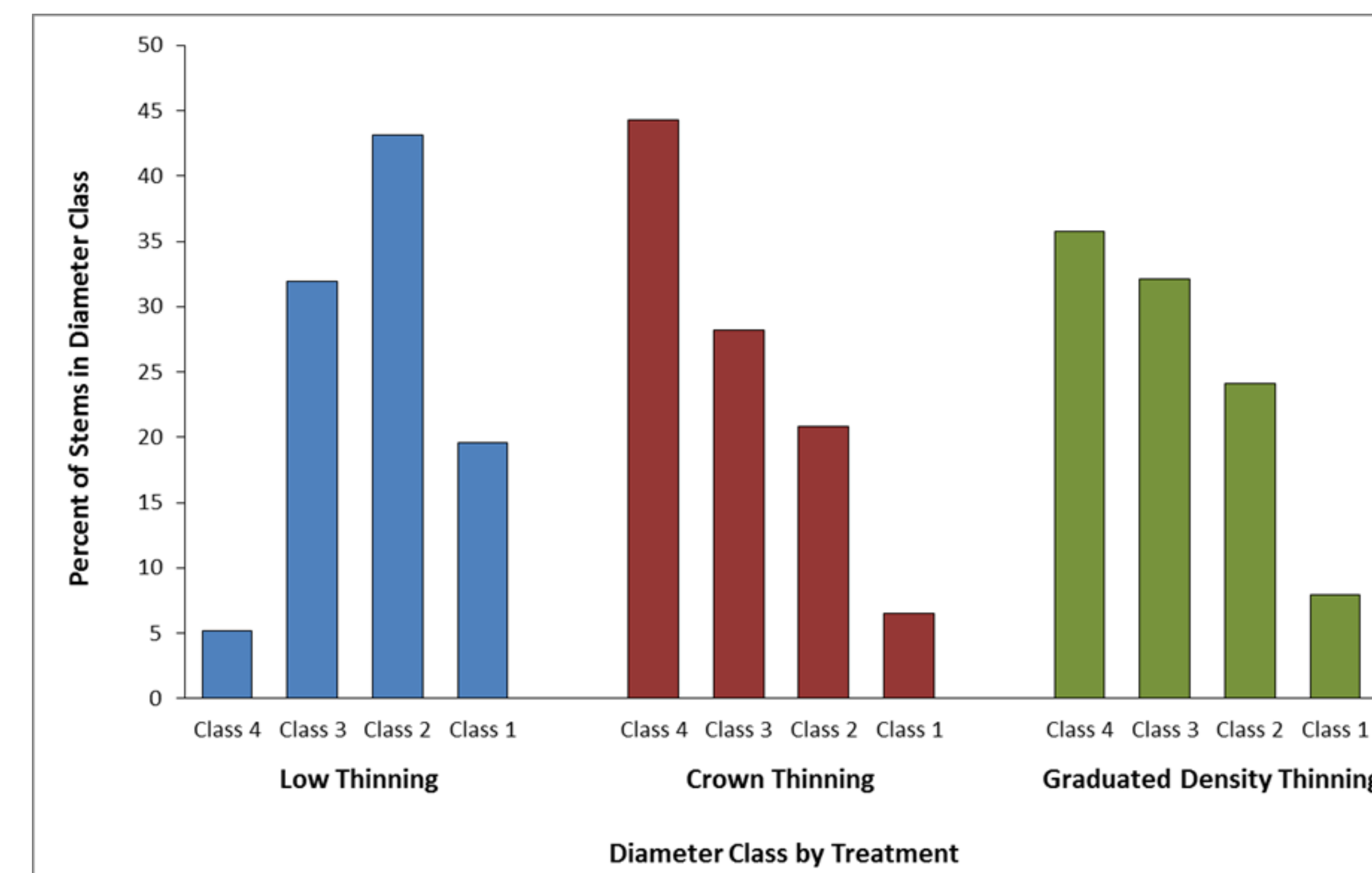
## Response



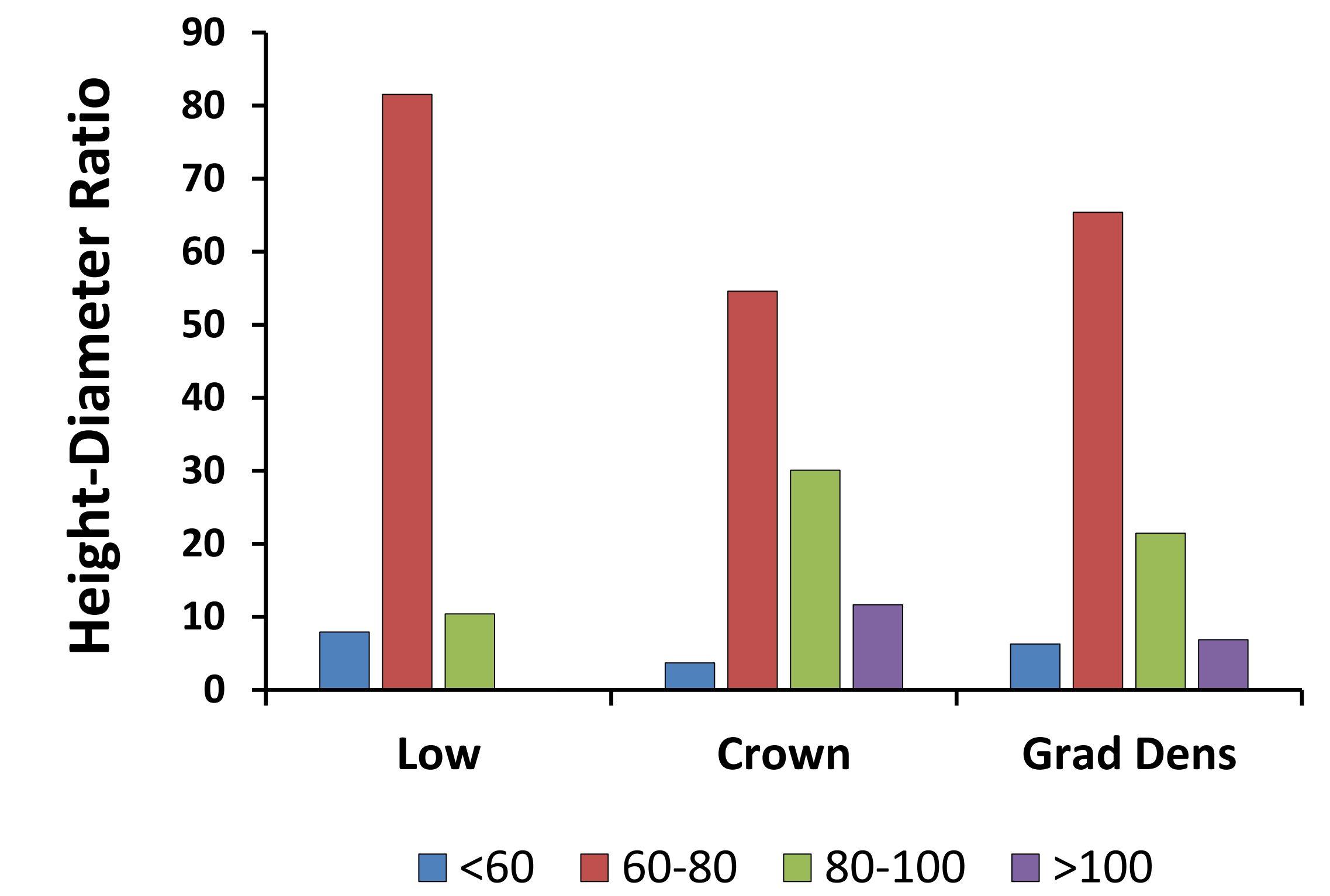
# Basal Area Dynamics: Treatment and Within Plot



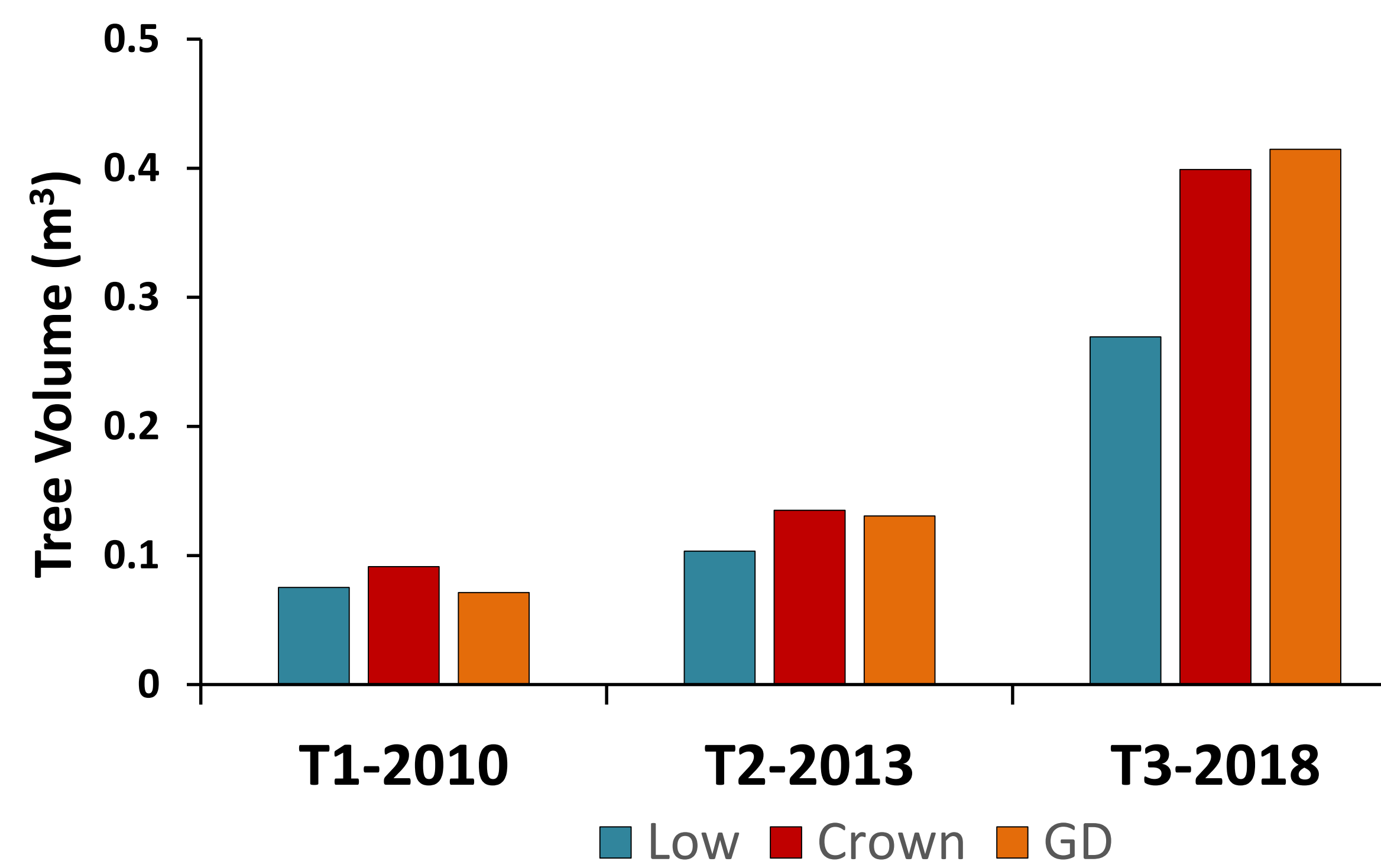
# Stand Structure



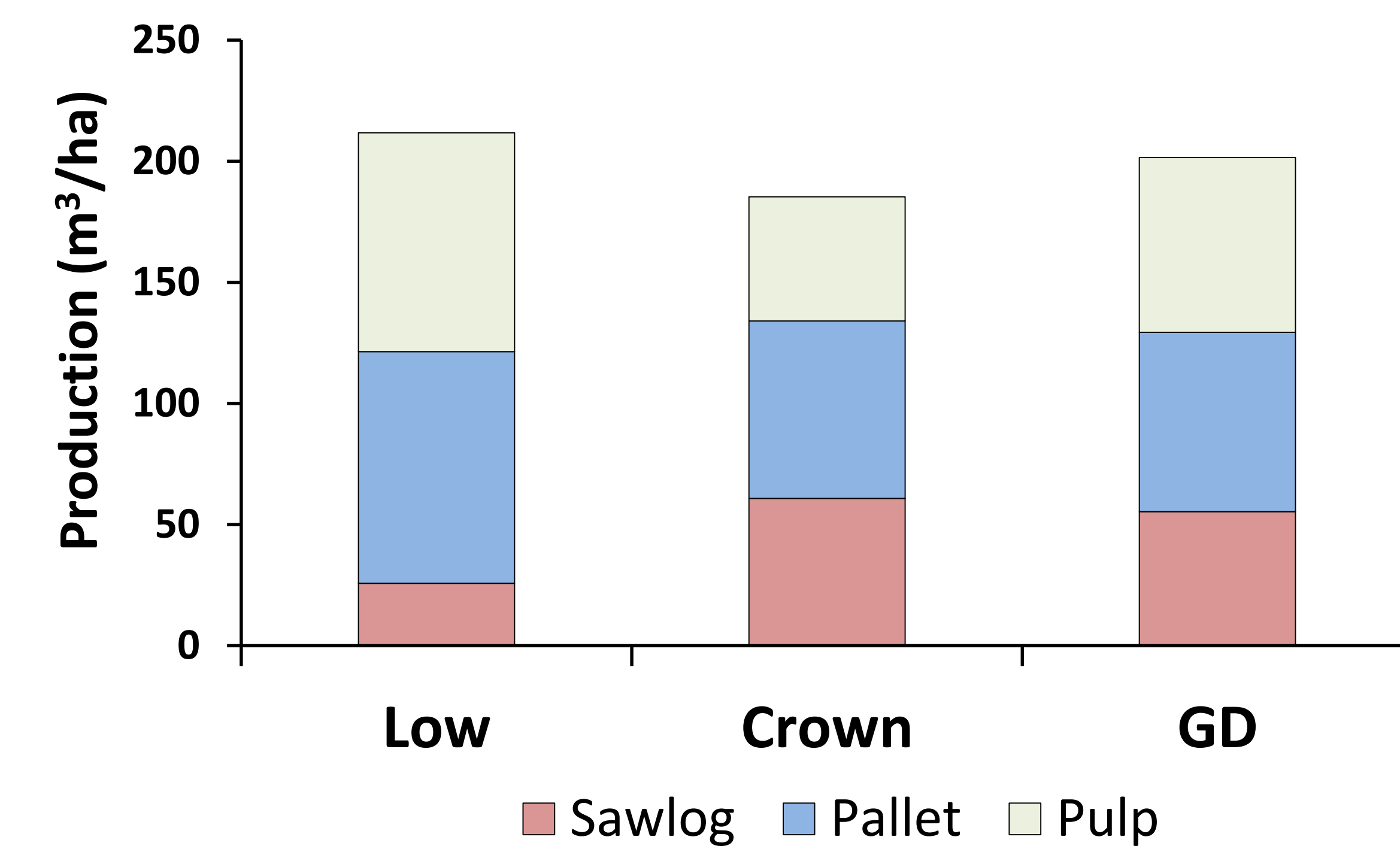
# Stand Stability



# Tree Removals



# Production

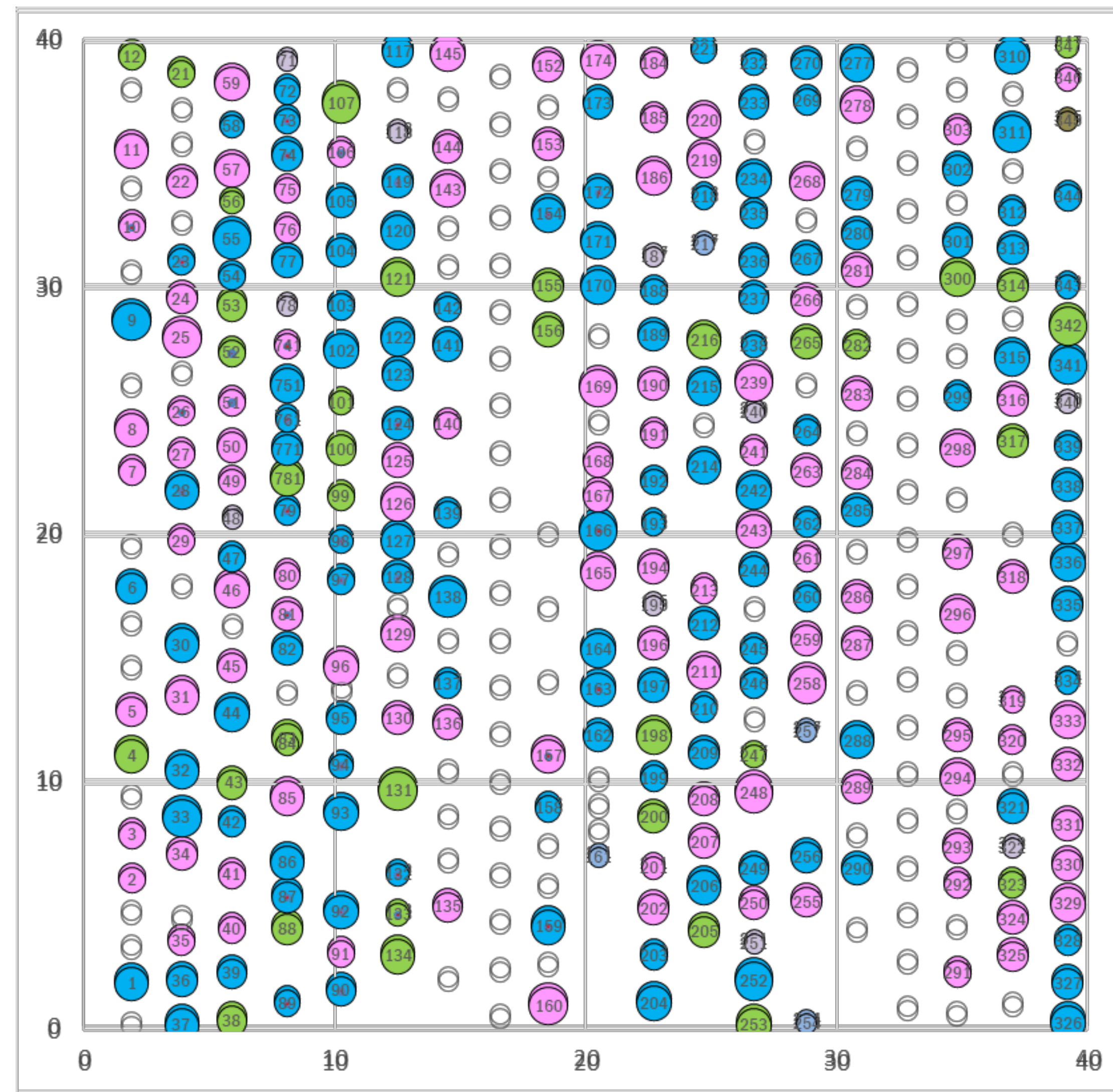




# Silviculture Training: Tree Marking Study

## Checking Actual Marking by Trained Tree Markers

### Independent Assessment of Tree Quality



- A/B Quality [Q trees]
- C Quality
- D Quality

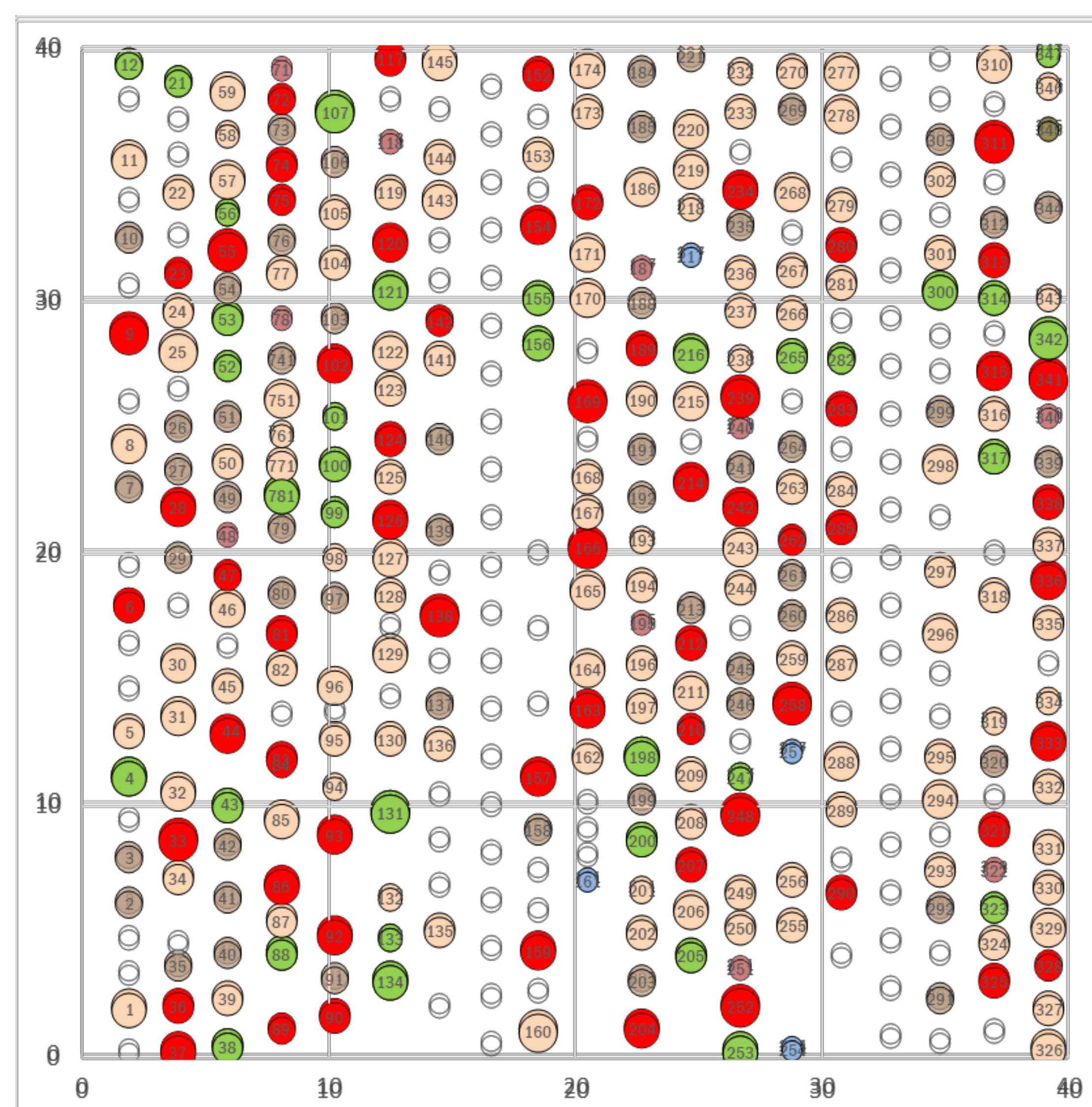


$v/V = 1.25$

Releasing Q trees



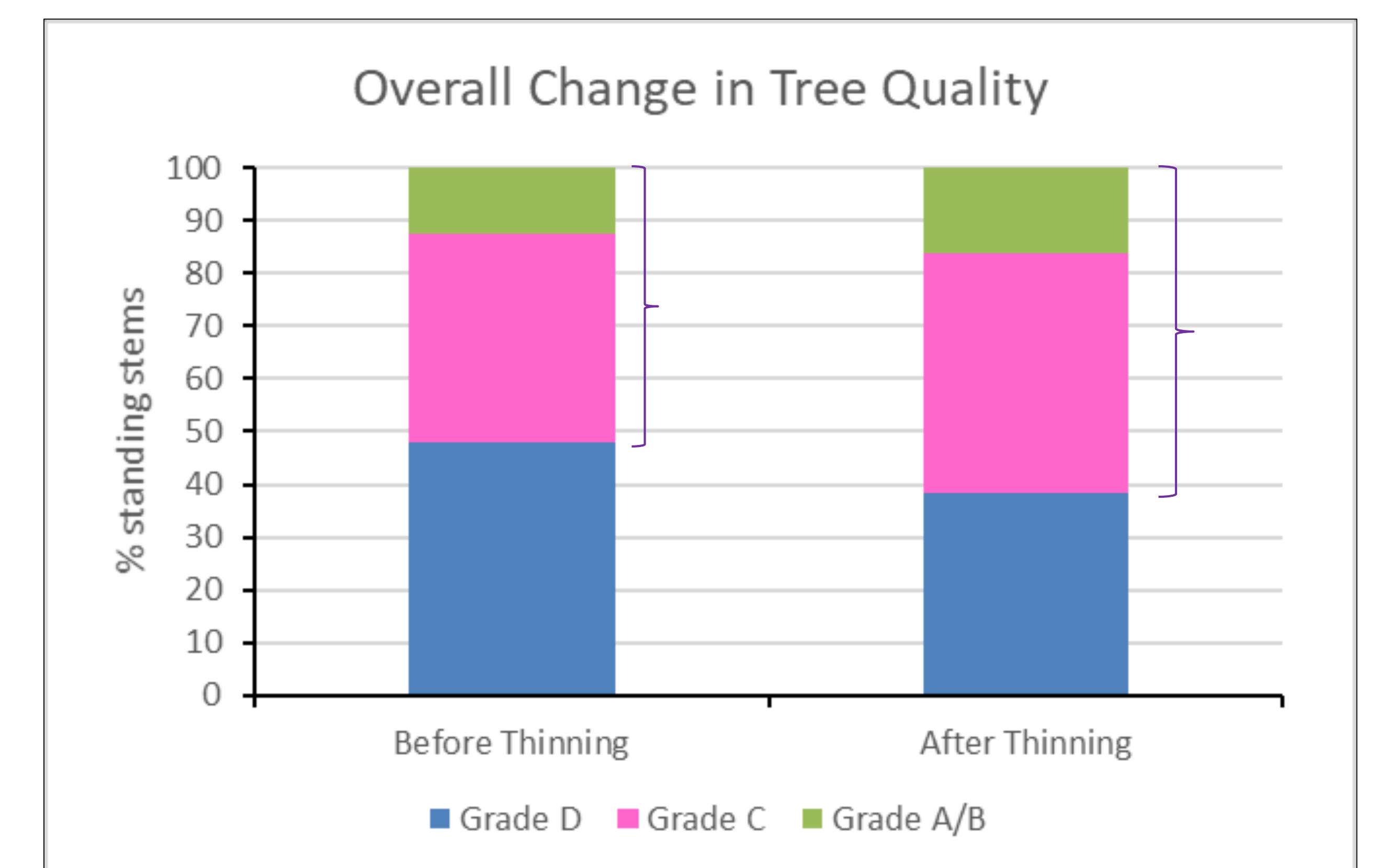
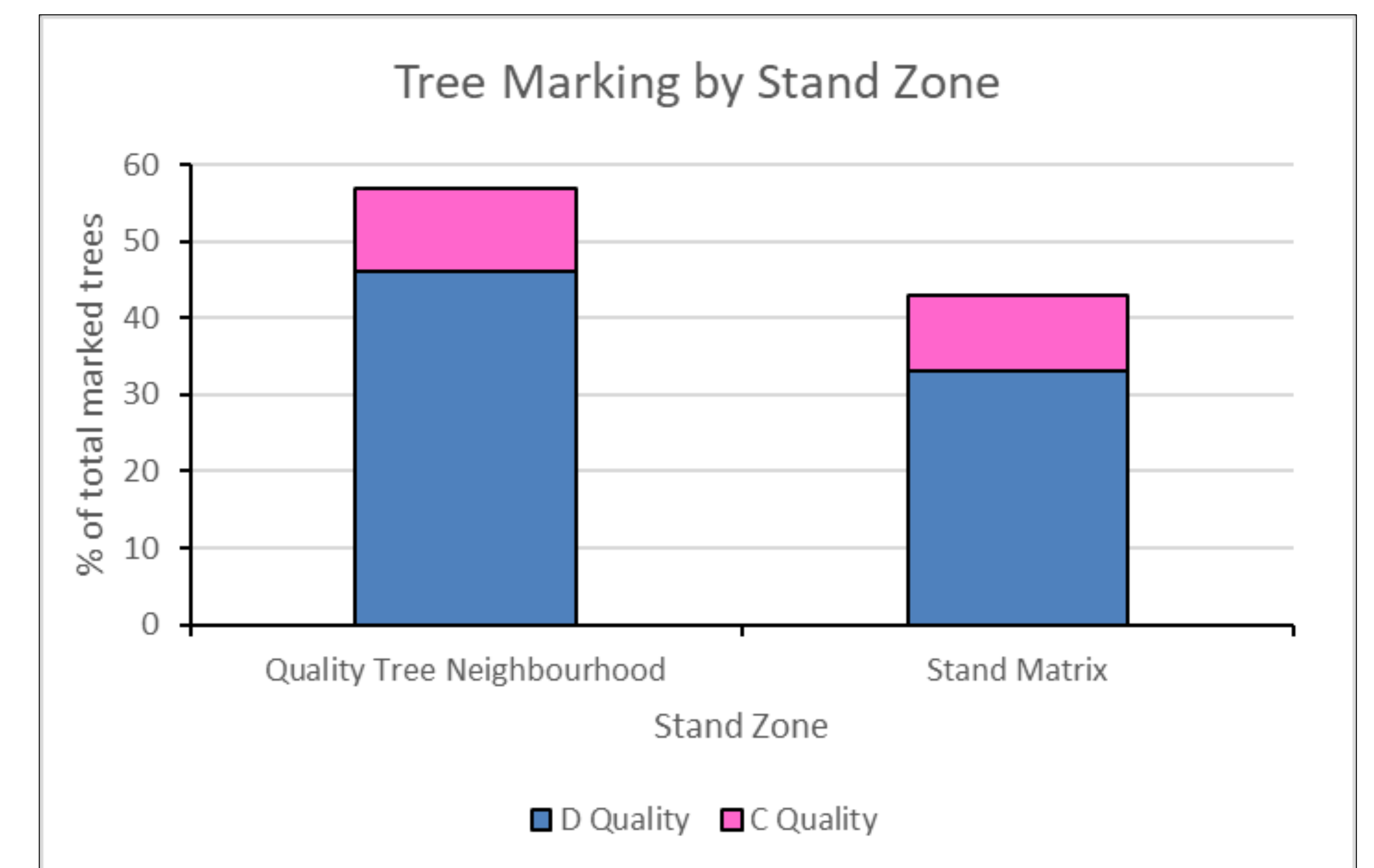
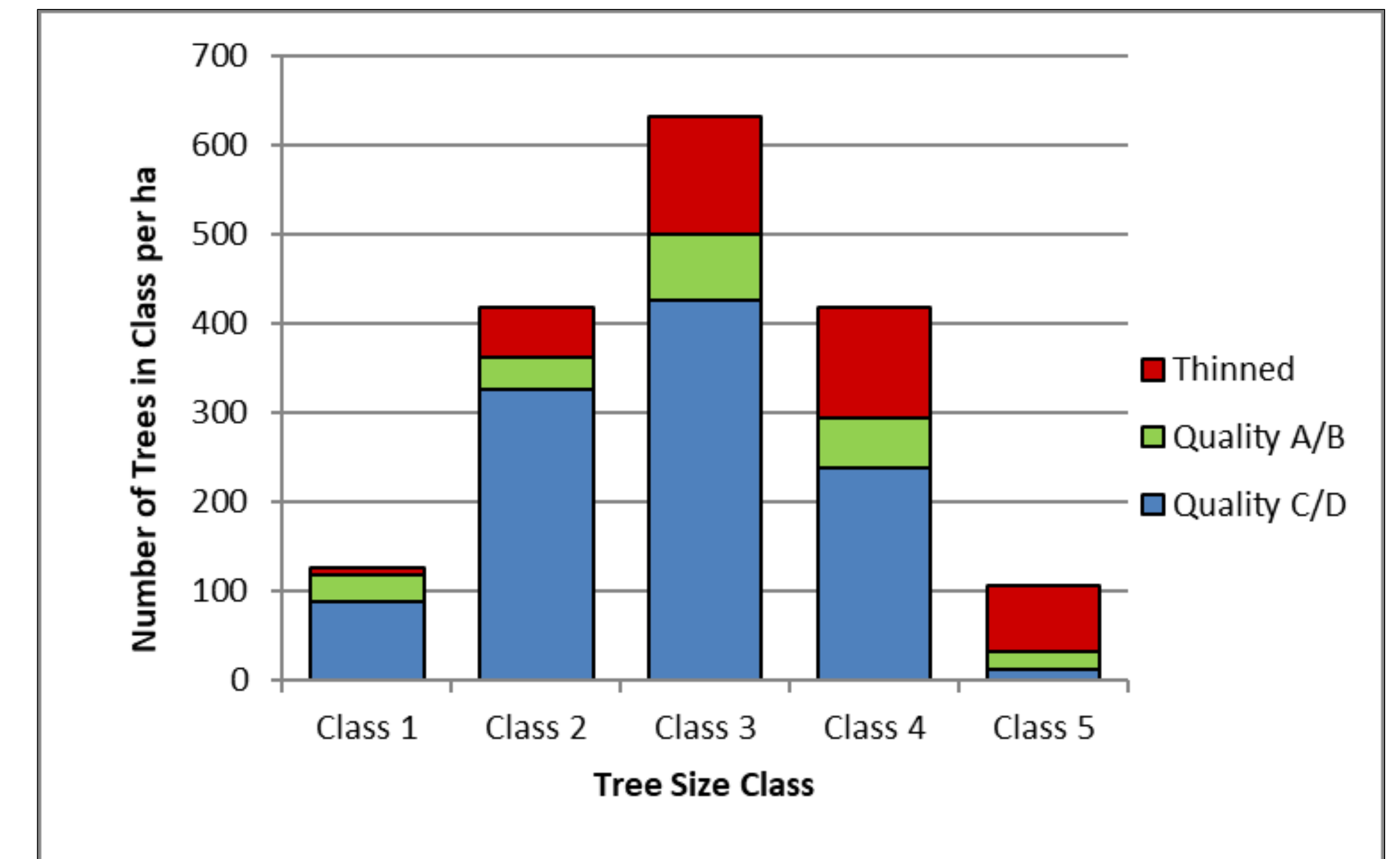
### Result of Tree Marking



- A/B Quality [Q trees]
- Marked
- Other Trees



10% gain in Quality





# Cloragh Woods

**A working forest delivering value-added timber products and diverse ecosystem services**

**Owners** Lucy Tottenham and Family



## Forest Information

**FOREST AREA** 197 ha

**ELEVATION RANGE**  
50–300 m asl

**ASPECT**  
South and south-west facing

**EXPOSURE**  
Sheltered in lower areas  
Exposed on higher ridges and hilltop

**SOIL TYPES**  
Alluvial soils along the valley  
Acid brown earths of various depths  
Lithosols on rocky outcrops

**PRECIPITATION**  
1078 mm/year (1984–2022)

## Forest Objectives

**ECONOMIC**  
Timber production  
Value-added products  
Film/TV location

**ENVIRONMENT**  
Conservation of ecosystems  
Protection of soil and climate  
Promoting forest connectivity

**SOCIAL**  
Recreation  
Education  
Training

**LAND MANAGEMENT**  
Integrating forestry and organic sheep enterprises

## Woodland Types

Native Woodland, including Devil's Glen pNHA (oak-birch-holly woodland)

Coniferous and mixed-species high forest

New plantations (established 2000)

## Tree Species

**CONIFERS**  
Sitka spruce, Douglas fir, Japanese larch, Scots pine, western hemlock and others

**BROADLEAVES**  
sessile oak, beech, chestnut, sycamore, birch and others



# Cloragh Woods

**Owners** Lucy Tottenham and Family



An Roinn Talmhaíochta,  
Bia agus Mara  
Department of Agriculture,  
Food and the Marine

## Management and Silviculture

### FOREST HISTORY

- Tradition of active forest management
- Transformation to CCF introduced in 2005

### STAND TRANSFORMATION

- Early stages: Crown thinning
- Later stages: Single-tree selection

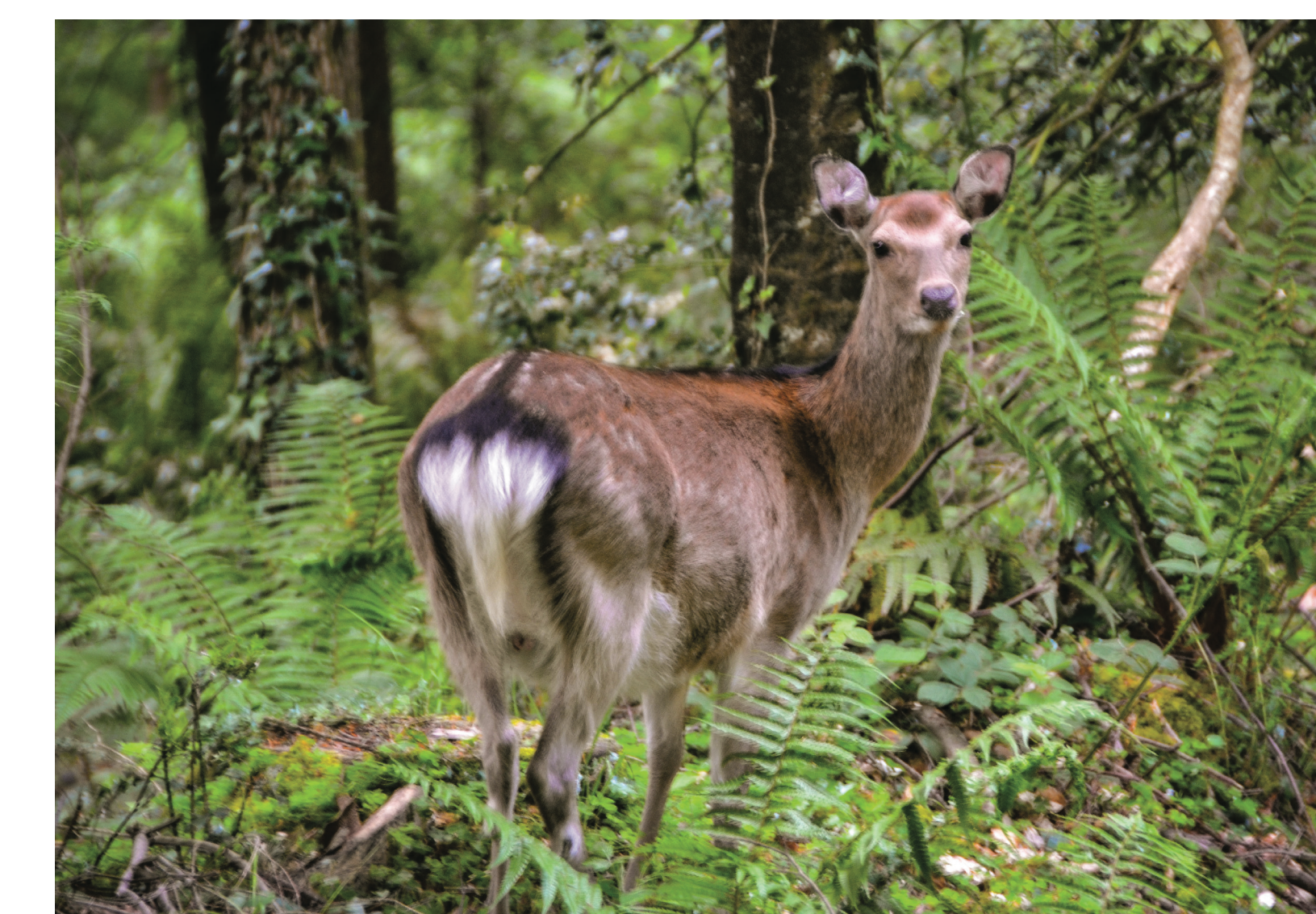


### TIMBER PRODUCTION

- General forest products
- Large-diameter logs
- Value-added and specialty products

### DEER

- Species: Sika and Fallow
- Active population control



### FILM/TV LOCATION

- Infrastructure and access
- Engagement and support

### EDUCATION

- Facilitating education and training





# Enabling New Networks for Innovation in Silviculture





# Knockrath Private Forest C19&20

**Owners** David Brabazon and Family  
**Manager** Paddy Purser

**SPECIES**

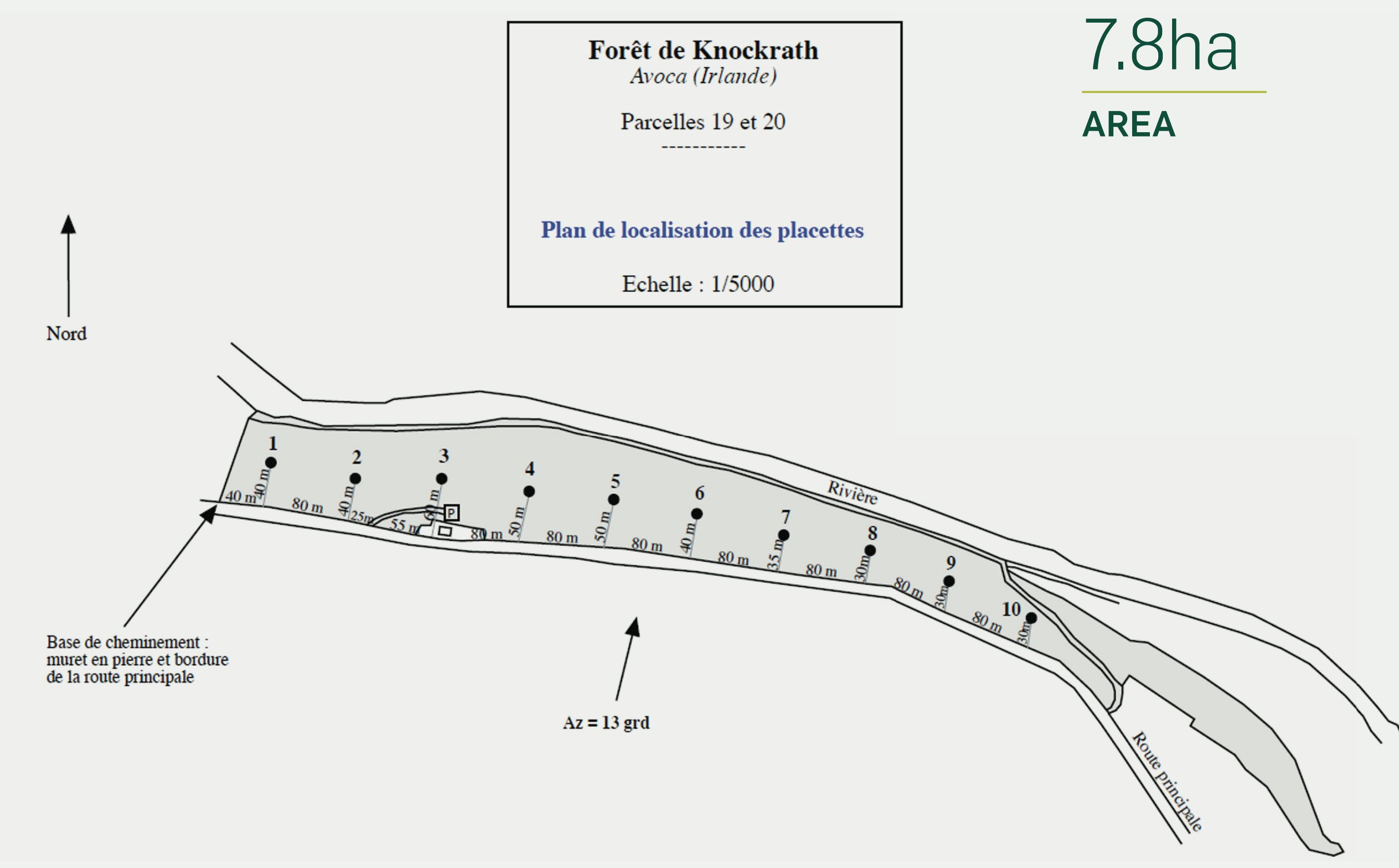
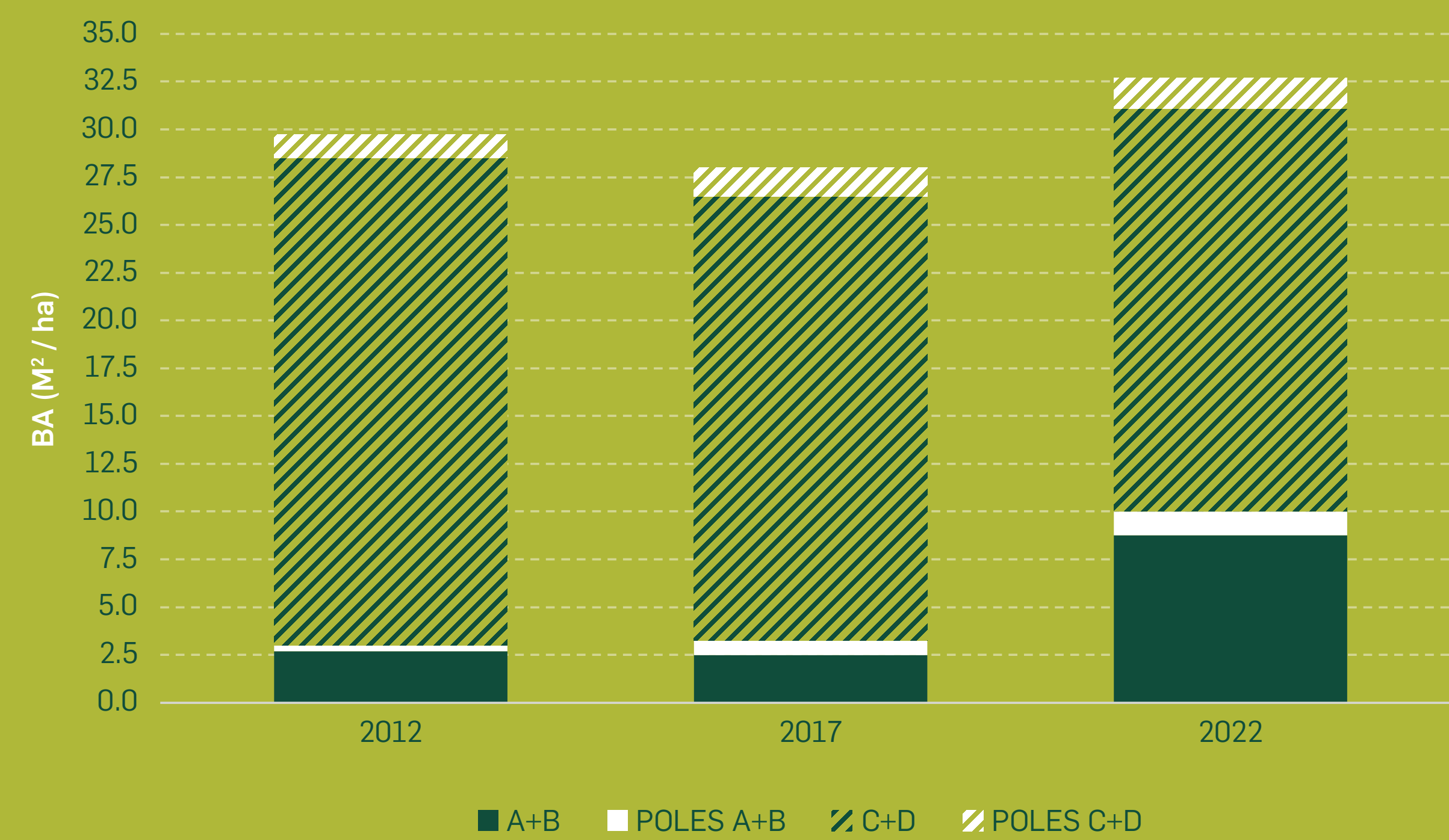
Douglas fir	<b>63%</b>
Japanese larch	<b>17%</b>
Sitka spruce	<b>12%</b>
Western Hemlock	
Sessile Oak & Beech	

**KNOCKRATH FOREST**

229 hectares
Acid Brown Earth Soils
1050mm rainfall annually
Native Woodland Type = Sessile Oak / Birch / Holly
In transition to CCF since 2005



### Monitoring of the quality distribution by basal area

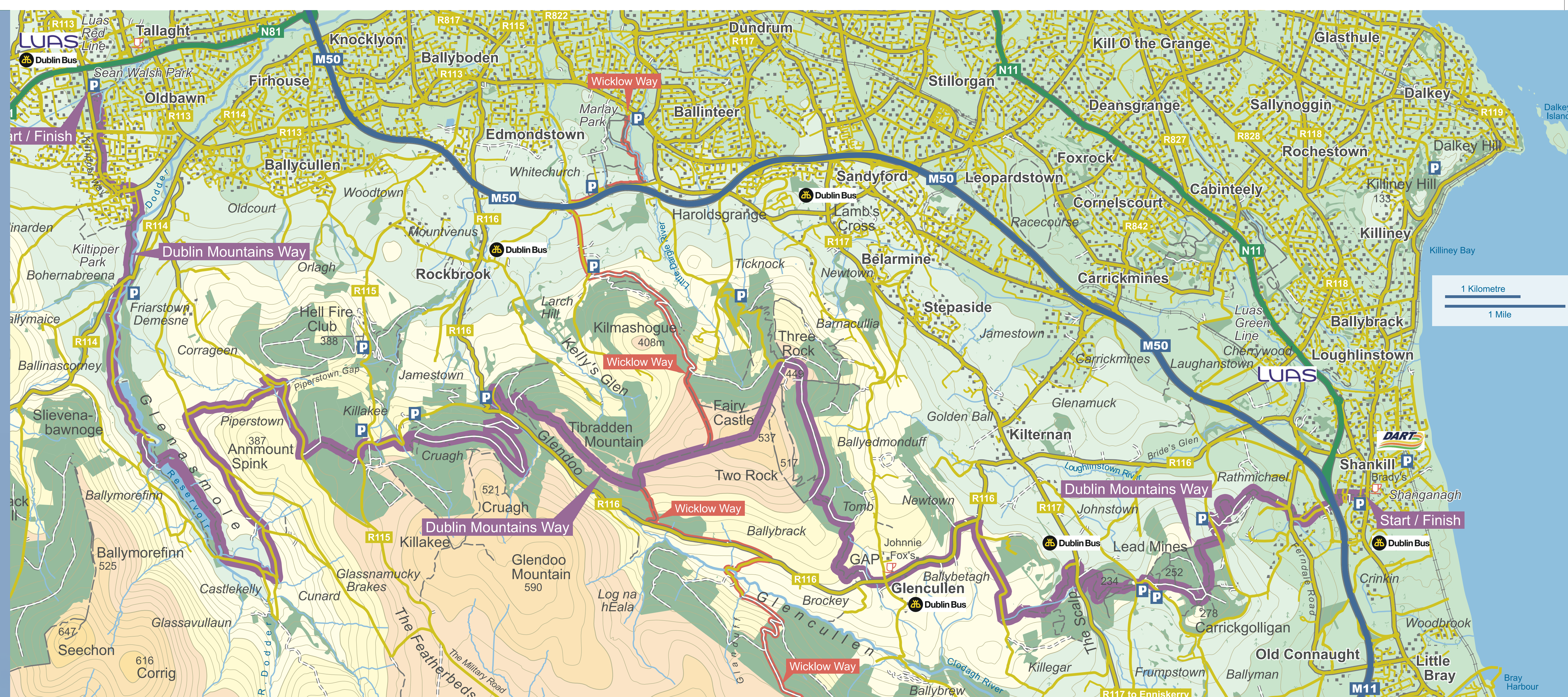


### Interventions





# The Dublin Mountains For People & Nature



Coillte is a state-owned forestry company that manages approximately 7% of the country's land. Coillte is focused on delivering the multiple benefits from its forests and land for climate, nature, wood and people.

440K ha

MANAGED LAND

800+

STAFF

3 Divisions

FORESTRY, LAND SOLUTIONS,  
MEDITE-SMARTPLY

2.6M m<sup>3</sup>

WOOD, REPLANTED 8,300HA

20%

LAND MANAGED  
FOR BIODIVERSITY

New  
Strategic Vision

FORESTS FOR WOOD, PEOPLE,  
NATURE & CLIMATE



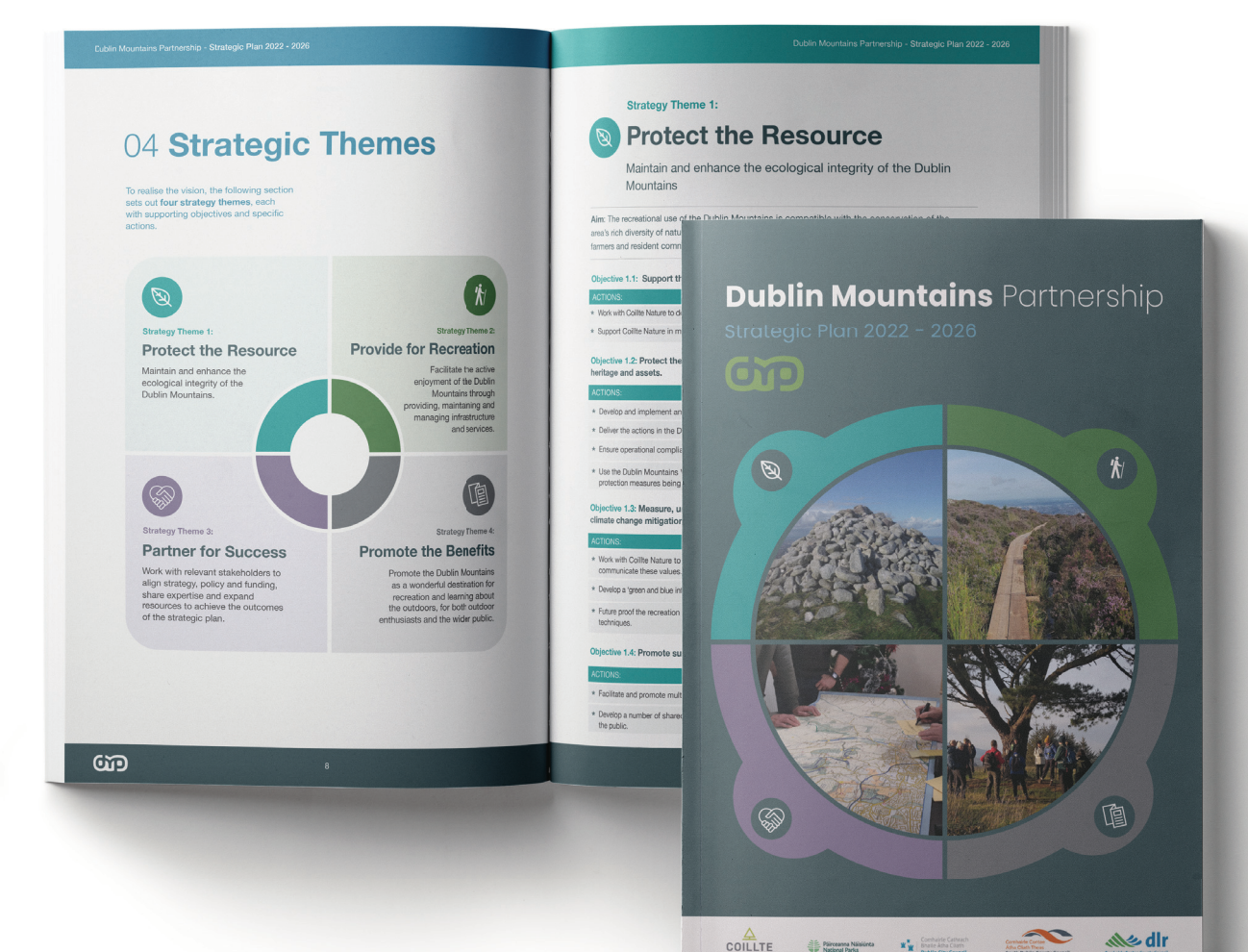
The Dublin Mountains Partnership was formed in 2008 to improve the overall recreation experience of visitors to the Dublin Mountains in a sustainable way in the context of the local community and the natural environment.

#### KEY ACHIEVEMENTS 2008–2022

Influenced the initiation of the Dublin Mountains Makeover • Volunteer Ranger Service • 600+ free events for the public • Development & maintenance of recreation trails including 42km Dublin Mountains Way • Community engagement • Promotion of responsible behaviour • A model of partnership.

#### DMP PARTNERS 2008–2022

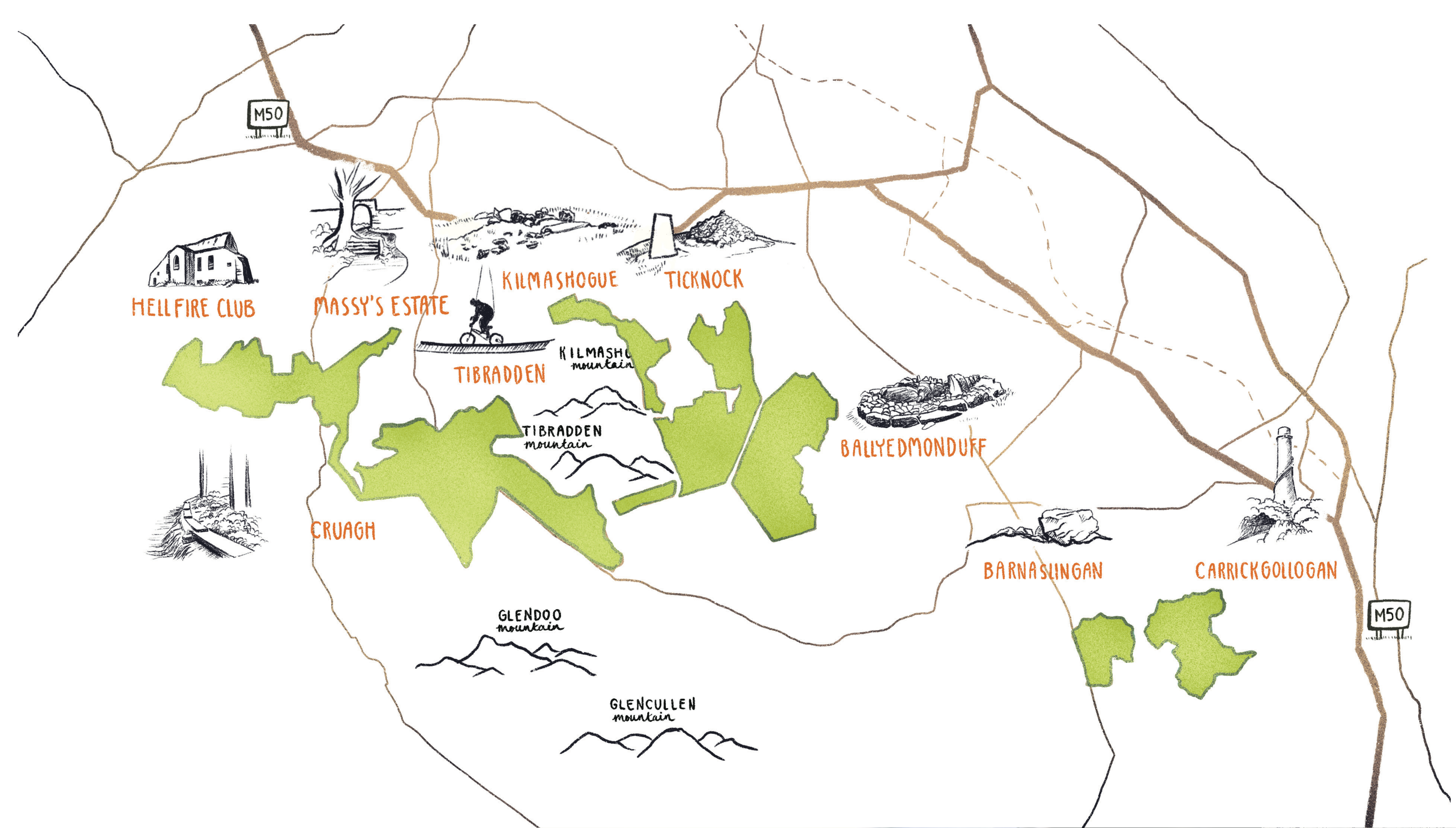
Coillte • Dún Laoghaire Rathdown County Council • South Dublin County Council • Dublin City Council • National Parks & Wildlife Service • Dublin Mountains Initiative.



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Bia agus Mara  
Department of Agriculture,  
Food and the Marine



# The Dublin Mountains For People & Nature



## COILLTE *nature*

Dublin Mountains Makeover  
is the flagship project of  
Coillte Nature, started in 2020

Nine properties (900ha) transition away from clearfell/replant model to multi generational forests managed under CCF principles.

Some areas R&R – remove and replant native species.

Given popularity and proximity to city – putting people and nature first.

Aim to improve biodiversity, climate resilience, enhance recreation and wider landscape aesthetic appeal.



### COMMUNICATION WITH THE PUBLIC

Emphasis on Stakeholder Engagement.

Signage, simple language, videos, community events.

### CHALLENGES

CCF late-stage transformation of stands.

Low species diversity, deer, windblow.

Managing operations with high recreation usage.

Staff & contractor knowledge & experience.

### BIODIVERSITY

Biodiversity management plans – forest & heath.

Long term monitoring plots: vegetation & fauna.



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Bia agus Mara  
Department of Agriculture,  
Food and the Marine



 **PRO SILVA**  
Annual Meeting  
Ireland 2023

