

Living with ash dieback –
Silviculture systems for Irish ash
(*Fraxinus excelsior*)

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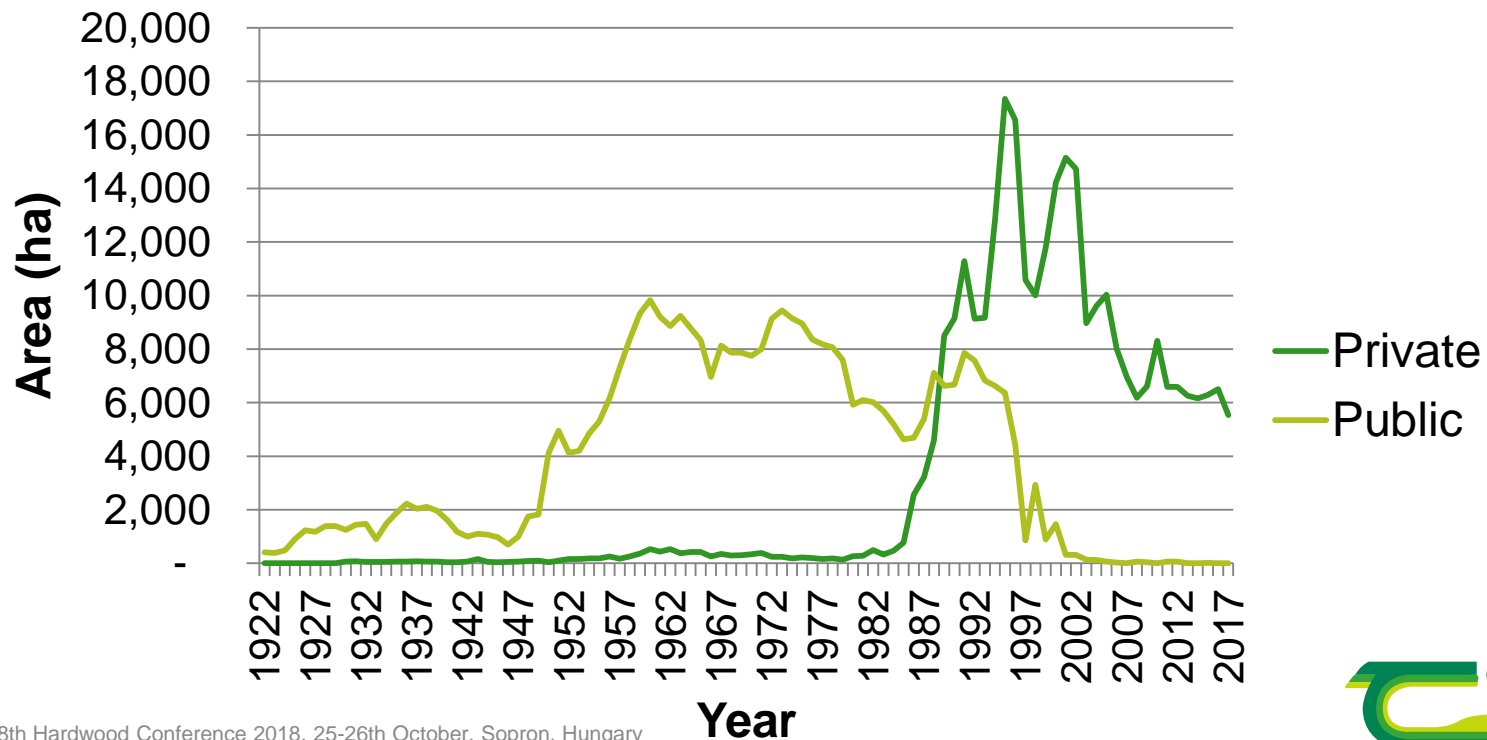
Introduction

- Importance of ash in Ireland
- Ash dieback in Ireland
- Potential mitigative silviculture
- Some considerations
- Some positives?

Importance of ash in Ireland

- Ireland forest area 770,000 ha (11 %)
 - Ash 25,000 ha

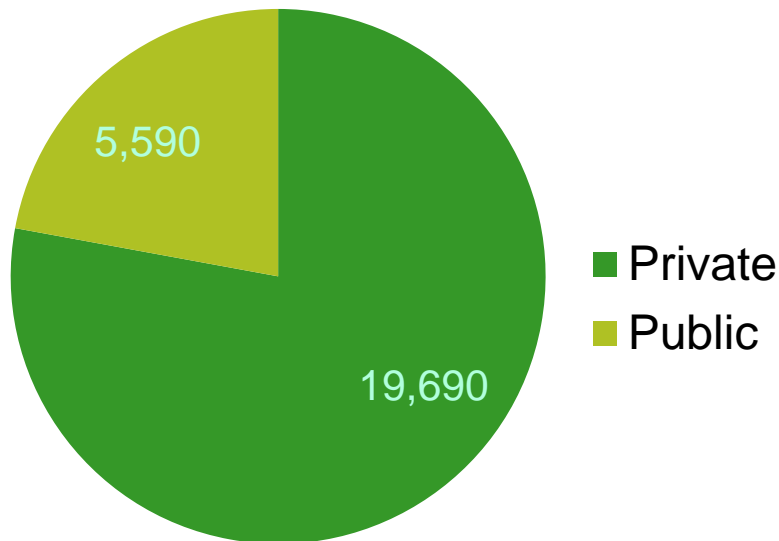
Afforestation (1922 – 2017)



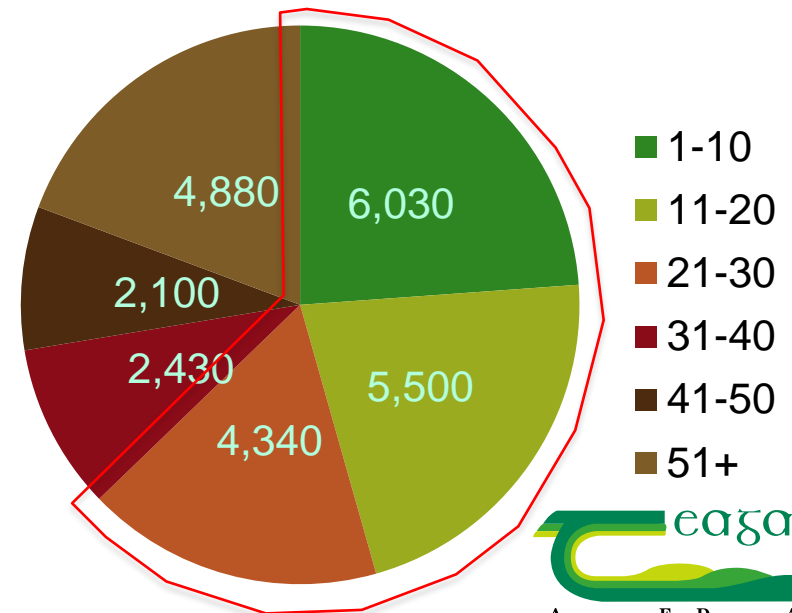
Importance of ash in Ireland

- Ireland forest area 770,000 ha (11 %)
 - Ash 25,000 ha
- Most common broadleaf high forest spp.

Area (ha)



Age profile of ash (ha)



Importance of ash in Ireland

- Ireland forest area 770,000 ha (11 %)
 - Ash 25,000 ha
- Most common broadleaf high forest spp.
- Culturally important
 - Hurling

Importance of ash in Ireland



Tony Grehan – Press 22

Ash dieback

- *Hymenoscyphus fraxineus*
 - Death of trees
 - \approx 1-3% tolerant
- 2012
- All-Ireland eradication policy
- Wider environment
- 2018 - Change in focus
 - Living with ash dieback
 - “...to ensure that the forest owner is provided with a broader range of silvicultural and management options.”



Minister of State for Agriculture Andrew Doyle

Selection thinning

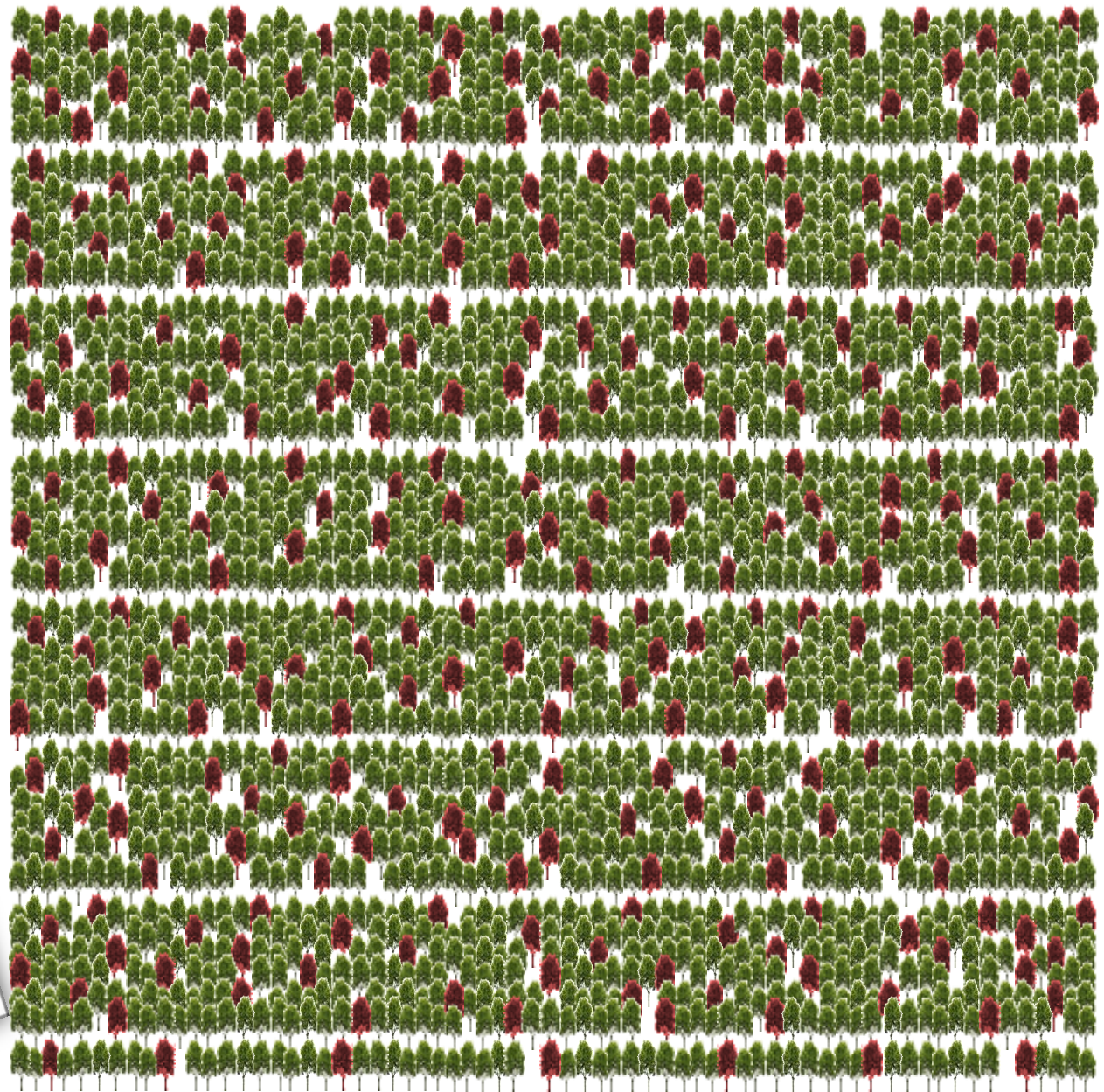
1 ha

1.5 × 2 m spacing

Racks 14 m

300 PCT ha⁻¹

Crown thinning

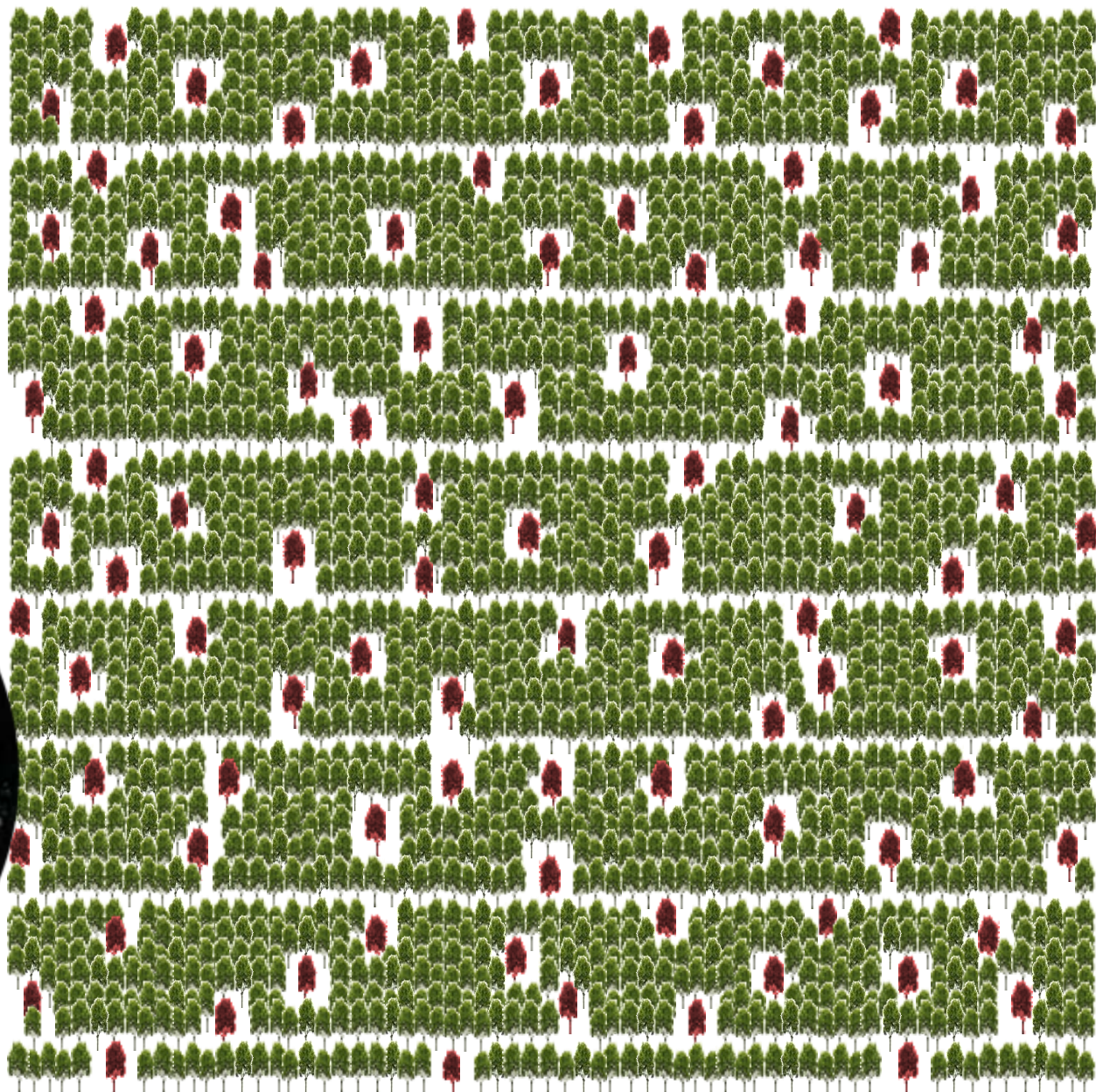


Free-growth

Racks 14 m

100 PCTs

Intensive crown thinning



Free-growth

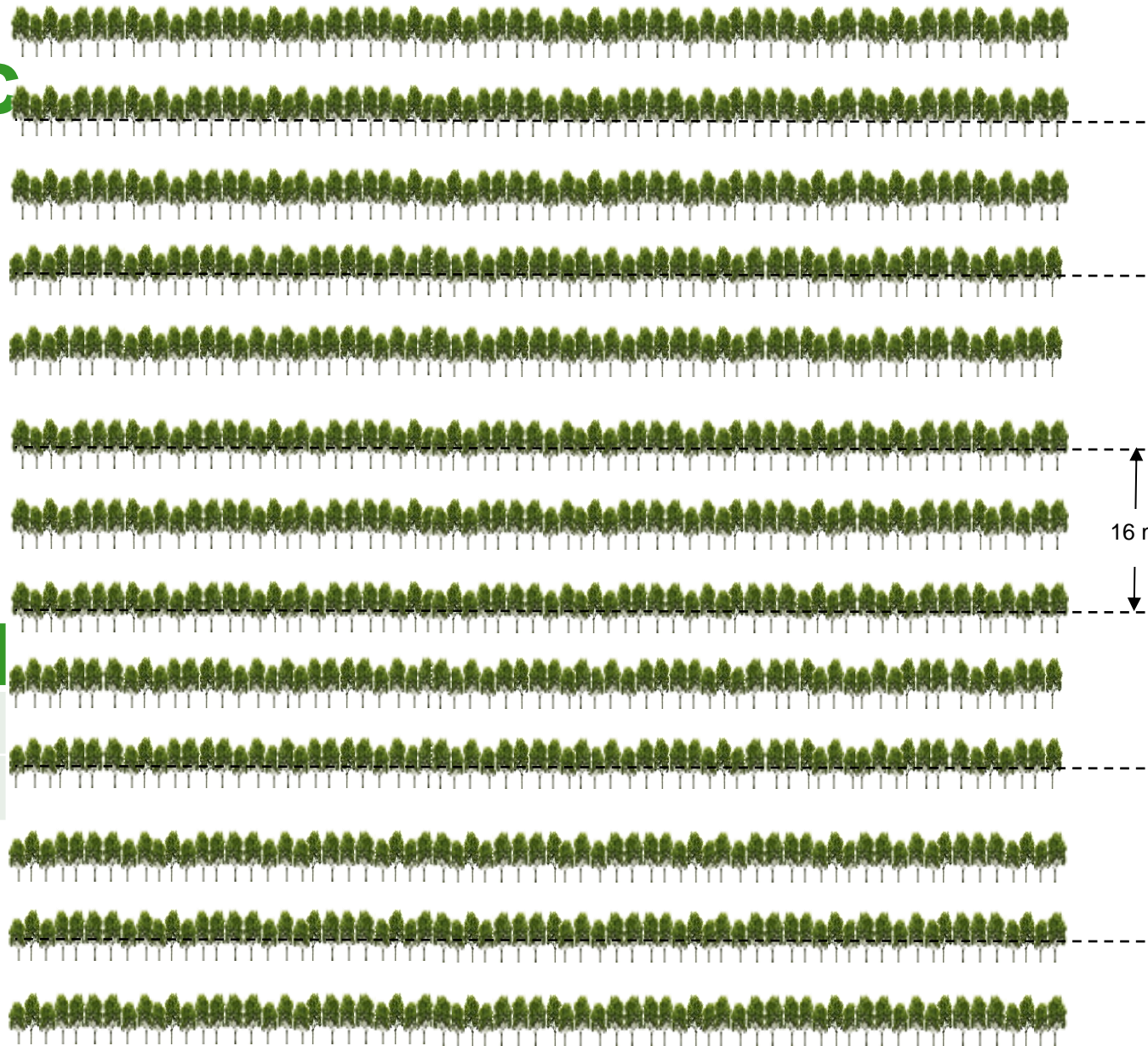
Racks 14 m

100 PCTs

Intensive crown thinning

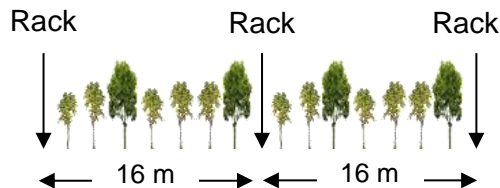


Systematic thinning 6:2



Racks 16 m
63 % replanted

Fell 6		Remain 2	
Replant	5		
Rack	1		

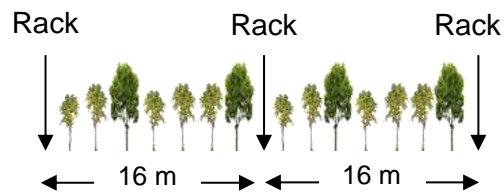


Systematic thinning

6:2

Racks 16 m
63 % replanted

Fell 6	Remain 2
Replant 5	
Rack 1	

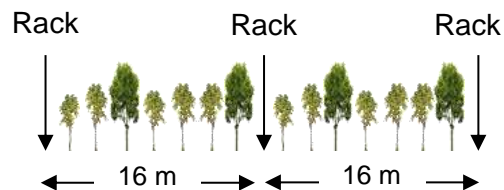


Systematic thinning

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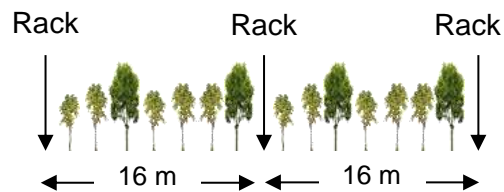


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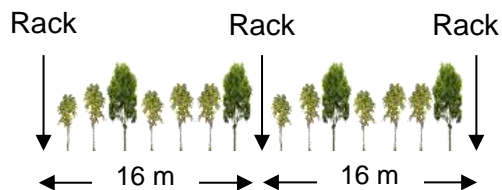


Systematic thinning

6:2

1 ha
1.5 × 2 m spacing
Racks 16 m
63 % replanted

Fell 6	Remain 2
Replant 5	
Rack 1	



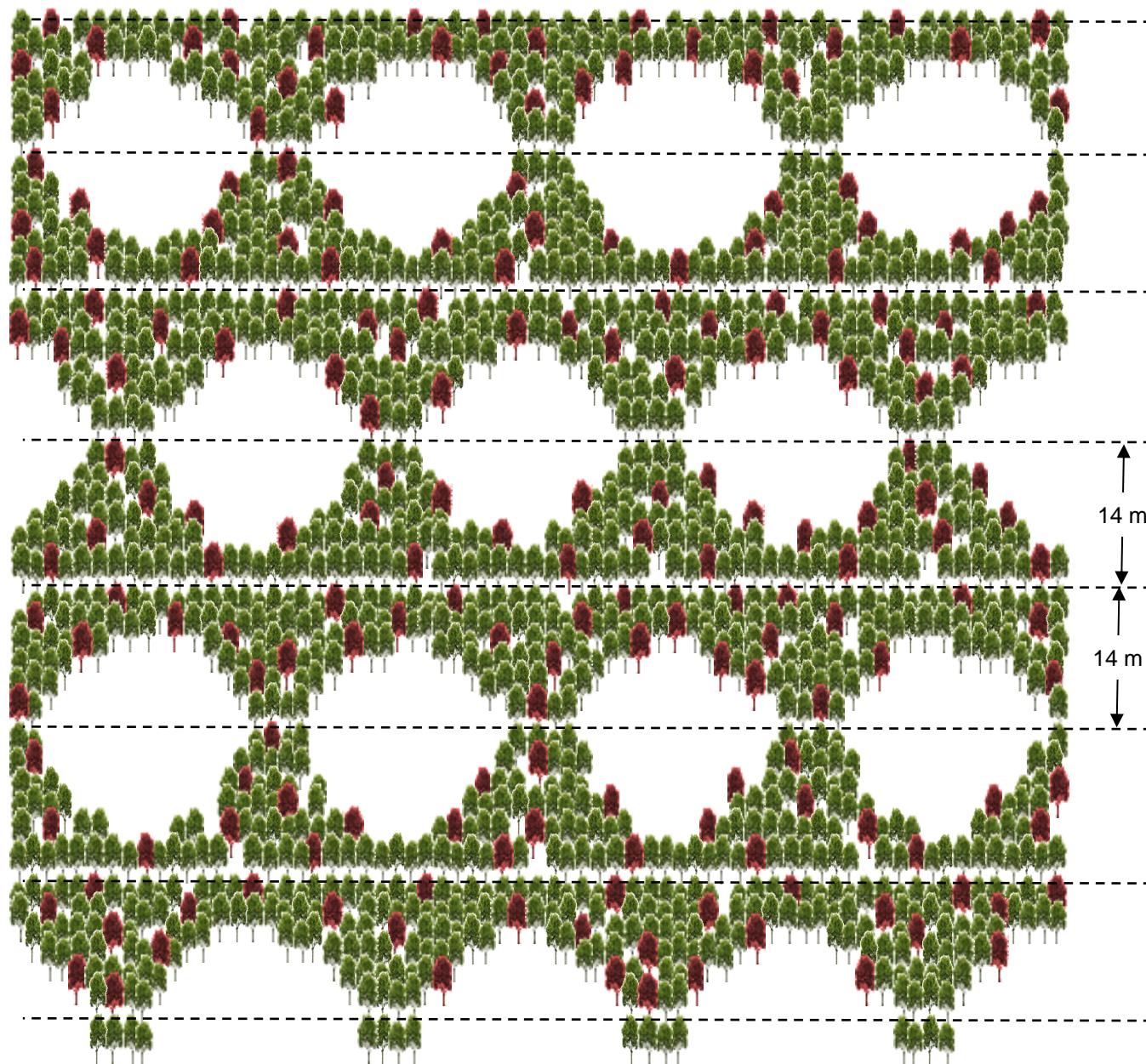
Circular coupes

Racks 14 m
150 PCTs ha⁻¹

Circular coupes 20 m dia
0.031 ha
50% area

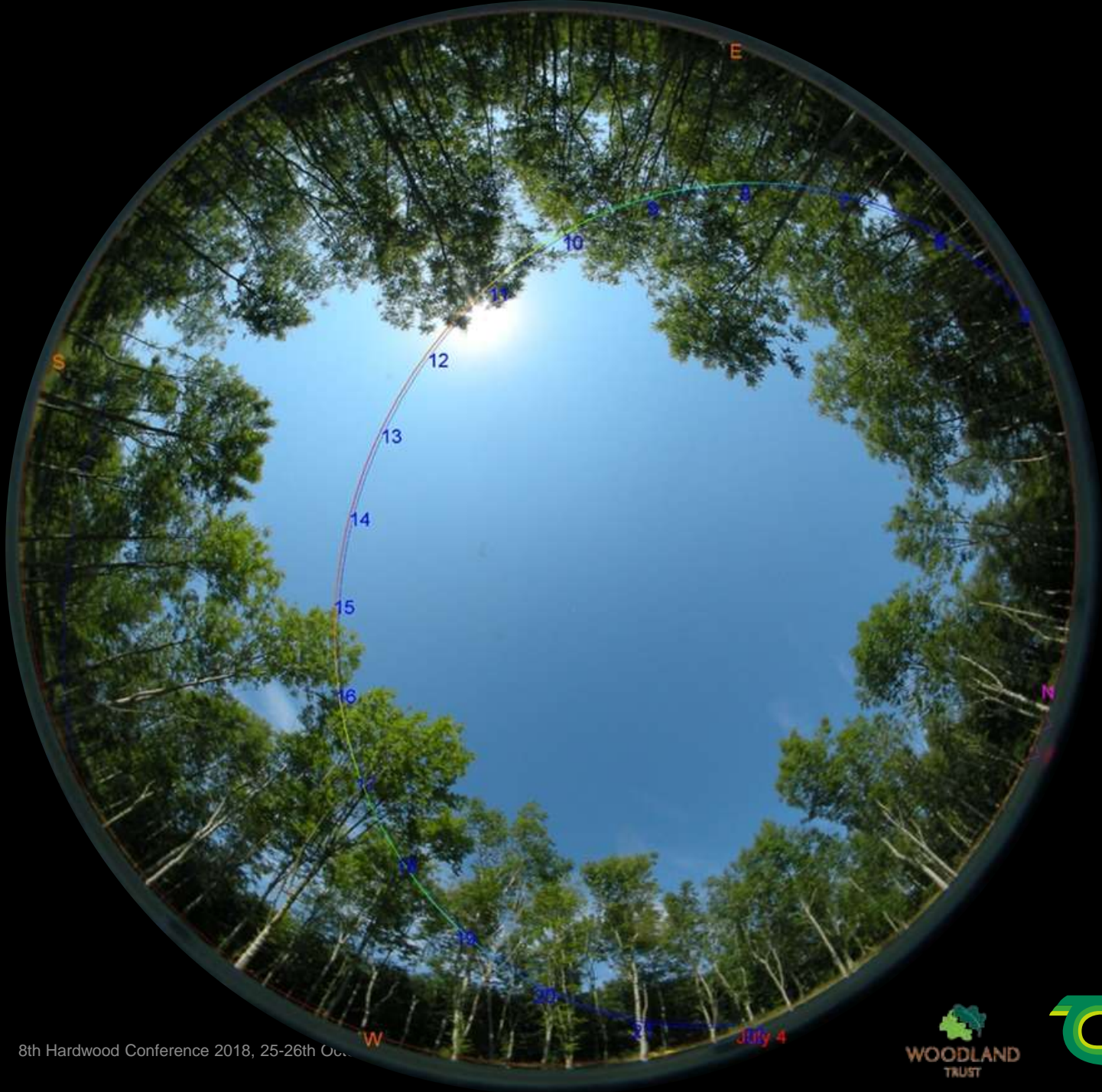
Replant coupes

Selection thin within
remaining stand

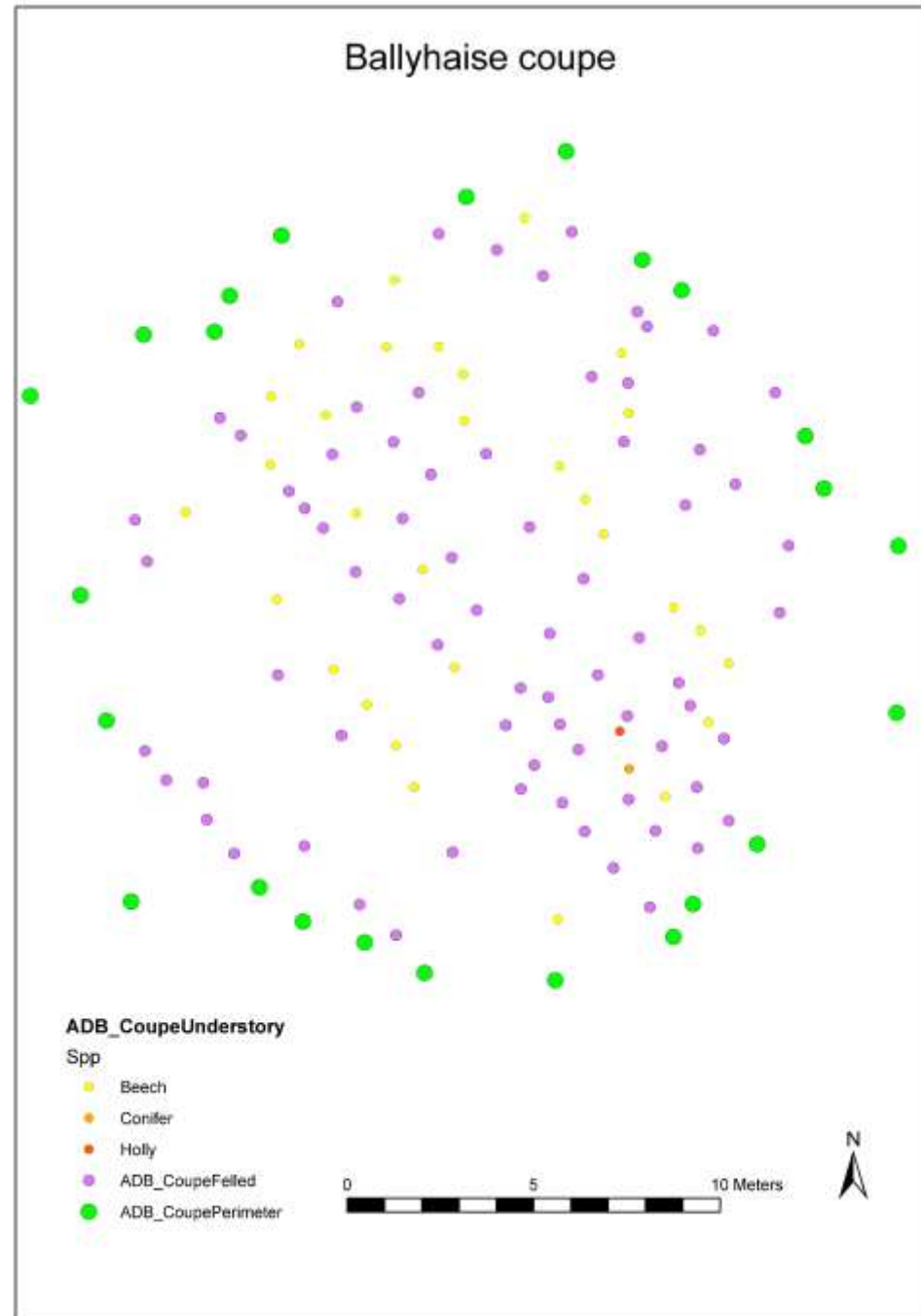




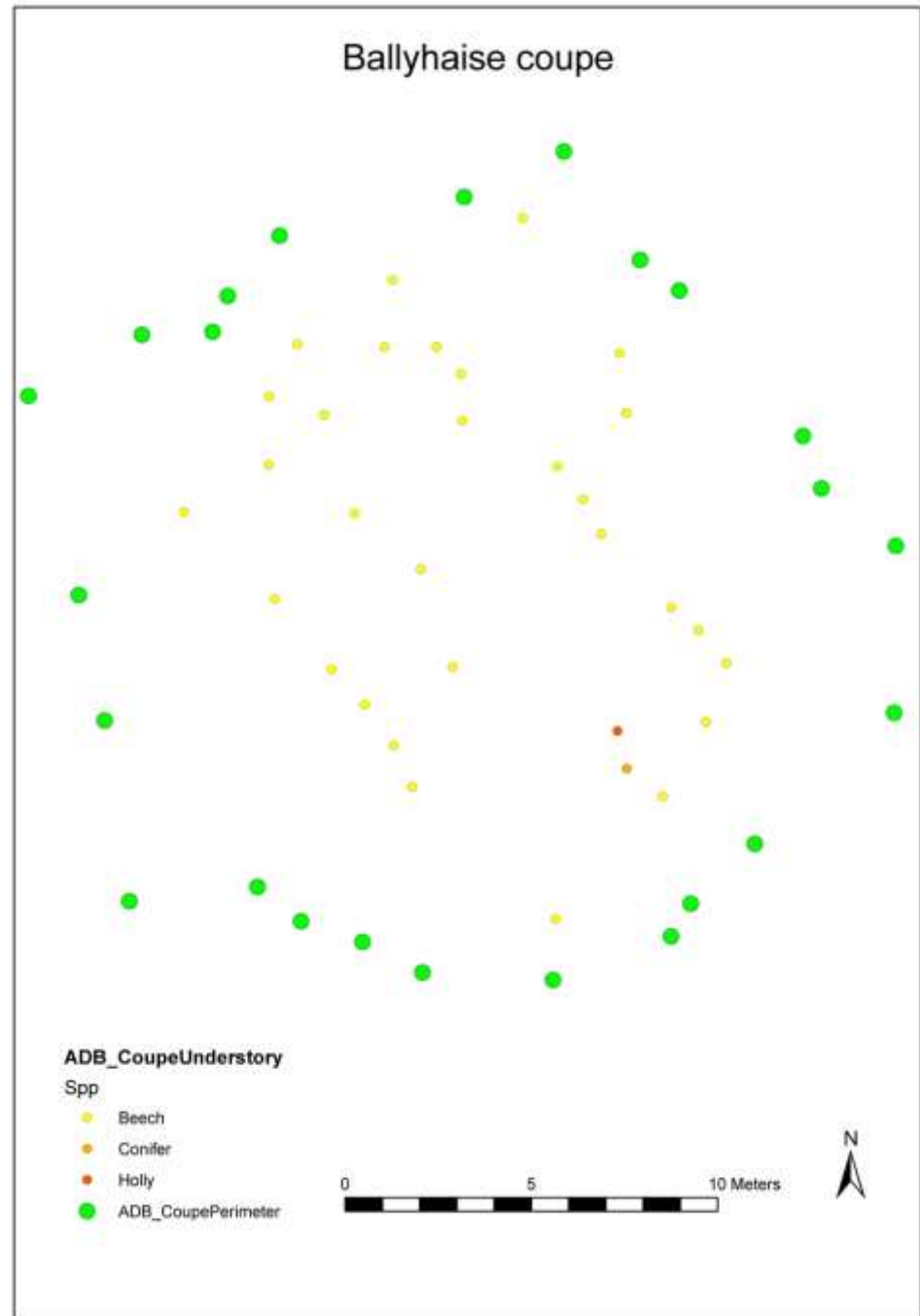
**Coupe replanted with oak, birch and hazel.
Inset: mulching head**



Pre-emptive



Pre-emptive





Considerations

- Planting area width
 - Light requirement of spp to be planted
 - Height of adjacent trees
 - Trials required



- Coppice regrowth
 - Control required?
 - » Reduce competition for replacement spp
 - » Reduce spore loading??
 - Herbicide?
 - » Flash-back?
 - Buffer zone?
 - Trials?
 - Manual control
 - » Brush cutter?
 - Mulch stumps

Future positives from ash dieback?

- Improved silviculture
 - Amelioration of poor-performing stands
 - Less prescriptive silviculture, more site-specific silviculture
 - Better soils for tree establishment
 - Shelter present
 - Species site-matching

Improved
hardwood stem
quality



Future positives from ash dieback?

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 - Amelioration of poor-performing stands
 - Less prescriptive silviculture, more site-specific silviculture
 - Better soils for tree establishment
 - Shelter present
 - Species site-matching
- Greater emphasis on thinning
- Greater owner (and public) interest
- Greater emphasis on establishing mixtures?
- Improved planting stock made available?
- Greater ecological & economic resilience

Thank you

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