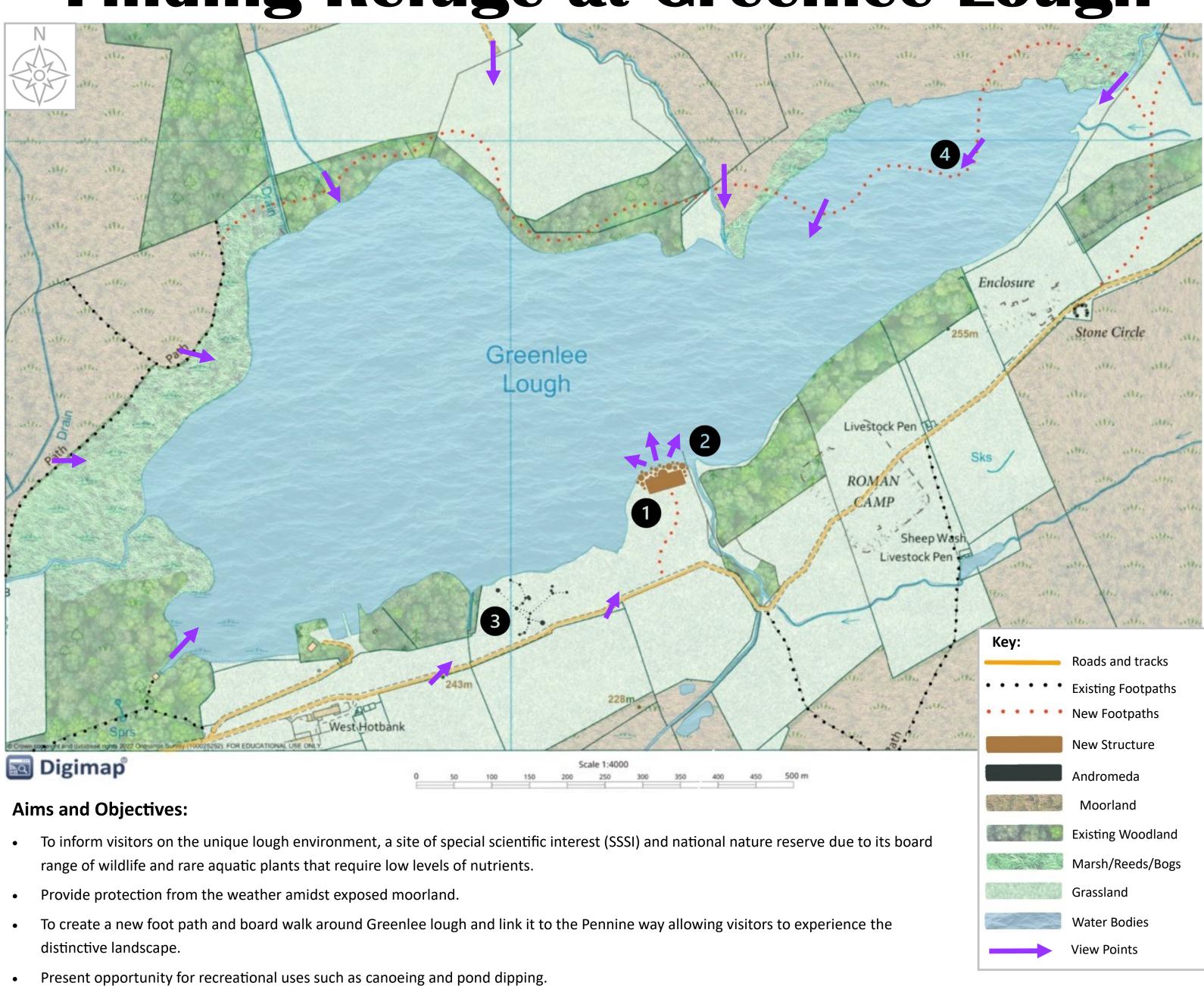
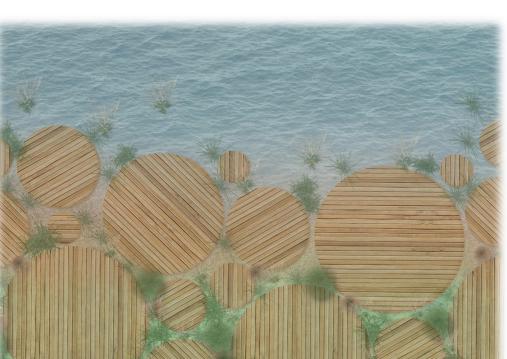
Finding Refuge at Greenlee Lough

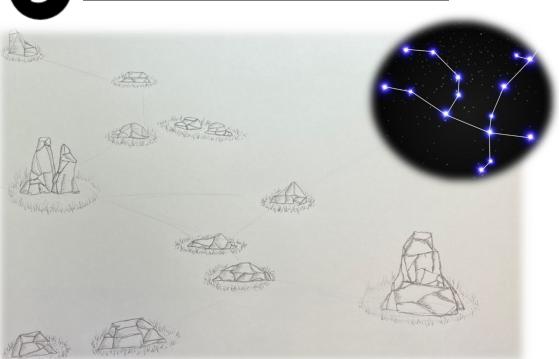


2 Decking

The building leads out on to circular decking among the reed bed. Visitors can look out over the lough to experience it from a different perspective or utilise the space for pond dipping. During clear nights, it would be used for star gazing. The circles allow family or fiends to feel separate in their own space whilst among others.



## **The Andromeda Star Consolation**



Board Walk



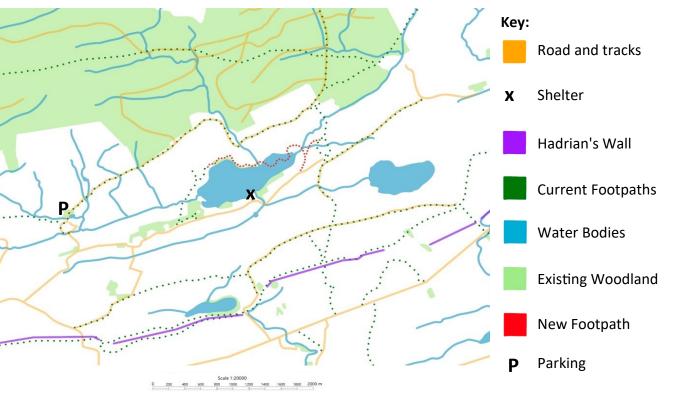
The site is situated within Northumberland National Park, north of Hadrian's Wall, surrounded by extensive moorland and occasional woodland.

Visitors will be encouraged to walk to the lough preventing contamination from cars. There are car parks at the Sill and outside Gibbs Hill Farm. To allow disabled access, a tuktuk van will be available to travel between the shelter and Gibbs Car Park over a track.

Currently there is little access to Greenlee Lough on footpaths. As a result, the new footpath will join up current footpaths and lead visitors on to a boardwalk over the lough and through the surrounding woodlands.

East of the shelter lie three historical sites: a roman camp, enclosure, and stone circle.

These structures inspired a new form of land art based on the Andromeda Star consolation which can be seen during a clear night. Formed from local stone, the positioning reflects the consolation where visitors can stroll through the trails between stones and discover more about each Star. During the night glow in the dark lights surround the stones creating a reflection of the consolation on the ground.



The map illustrates how the new walking route interlinks with existing roads and footpaths.

**Inspiration** 

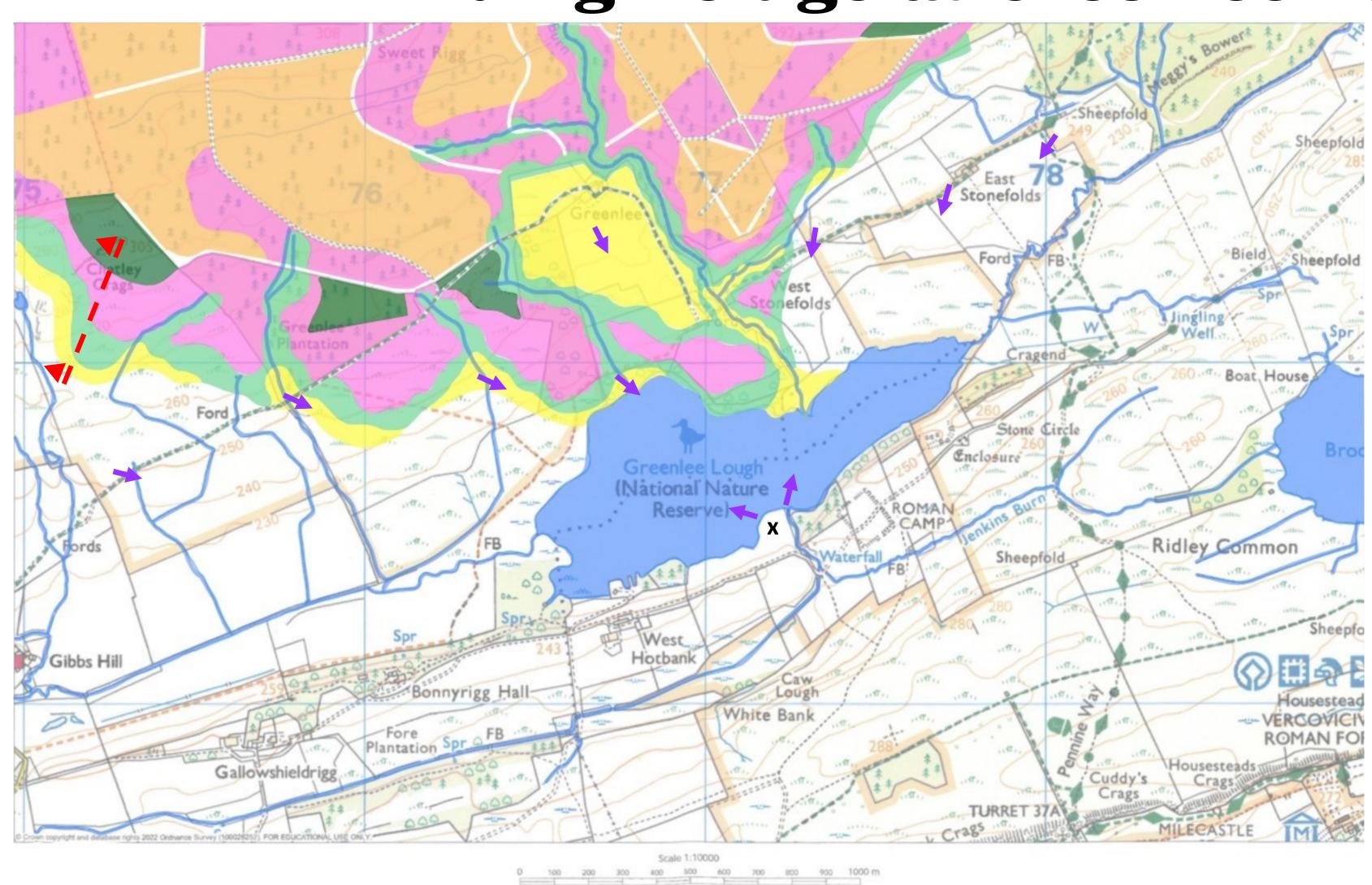
Georgie **Templeton** 

The geometric building will act as a shelter within the exposed landscape. It will offer amenities, a café and educate visitors about the local environment and its ecosystem. Its fluid roof mimics the sloping moorlands, allowing it to blend in with the surroundings. The roof will function as a solar energy generator as well as a green roof. The species used in the planting include the local Whin Sill grassland, such as cowslip, violets, red campion, and lesser trefoil.

• To engage visitors with a dark sky experience.

**Shelter** 

## Finding Refuge at Greenlee Lough Planting Schedule



## **Aims and Objectives:**

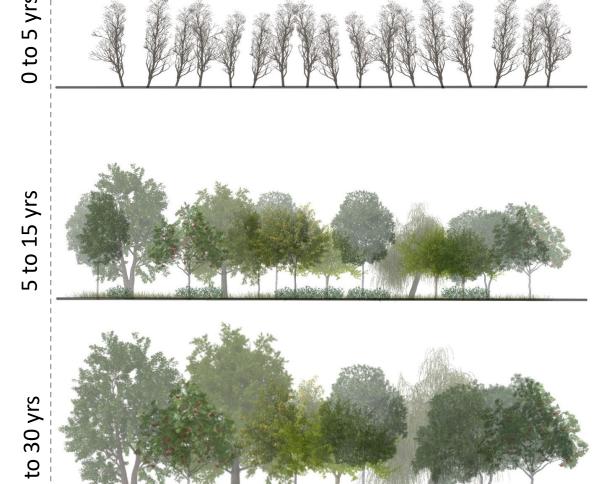
Section:

- To develop the existing Coniferous crop.
- To connect areas of existing woodland creating a cohesive and biodiverse forest.
- To create a forest planting that sits naturally into the existing landscape while directing the view towards Greenlee Lough.
- To use native species so that the special whin sill grassland and Greenlee lough ecosystem continue to thrive in the landscape.
- To provide a range of habitats for wildlife through the forest succession.



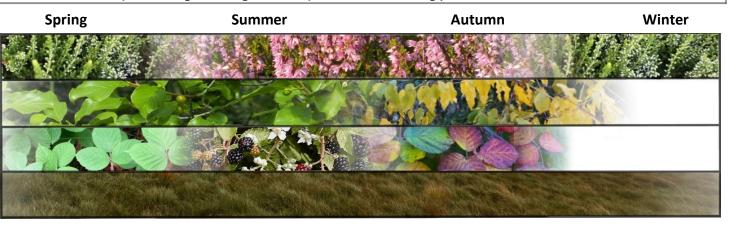


## **Forecasted Growth**



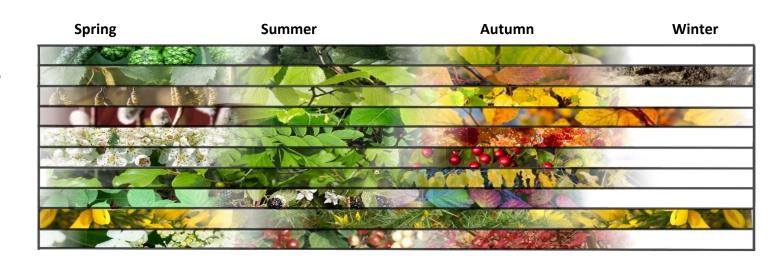
	Mix 1 - Scrub/ground cover											
Species	Common Name	Mix %	Form	Notes	Management							
Calluna vulgaris	Common Heather	20	Seeds	The scrub area is approximately	Native Northumberland grass seeds should be collected from the landscape and sown into the scrub area during autumn to retain the							
Frangula alnus	Alder Black Thorne	15		1735m2 and will require on average	genetic integrity of the surrounding vegetation. Once shoots appear, protect the area with a rabbit and deer proof fence. Every 5 years							
Rubus fruticosus	Blackberry	15		34,700g of seed mix (20g per m2)	manage the areas to create a soft succession into the woodland edge and ensure the special whin sill grassland species are still							
Native Northumberland grasses		50		evenly dispersed throughout the area.	dominant in the landscape. If scrub gets too high or dense prune or thin accordingly.							

Due to the acidic peaty soils, the lack of nutrients provides the perfect conditions for the native Whin Sill grassland. The seed mix will ensure the new scrub will disperse evenly across the area and allow the succession to merge into the existing landscape.



Species	Common Name	Mix %	Size	Form	Spacing (m2)	Density (m2)	Quantity	Notes	Management
Alnus glutinosa	Common Alder	25	600-900	Feathered	2	0.5	1250	Plant in groups of 5-10	Plant saplings early spring in a loose grid layout and enclose the area with a rabbit and deer proof
Betula pubescens	Downy Birch	10	600-900	Feathered	2	0.5	500	Plant evenly dispersed throughout	fence. If over time the fence is infiltrated, protect saplings with biodegradable tubes. Remove
Corylus avellana	Hazel	15	500-700	whips	2	0.5	750	Plant in groups of 5-10	tubes after 5-10 years depending on diameter of the base of the trunk.
Salix caprea	Goat Willow	25	500-700	Whips	2	0.5	1250	Plant in groups of 5-10	
Sorbus aucuparia	Rowan	25	500-700	whips	2	0.5	1250	Plant in groups of 5-10	Allow a succession to develop with lower shrubs merging into the scrub mix and build up to mature
				Shrub L		broadleaf planting. If shrubs and trees get too high or dense, prune or thin accordingly to ensure			
Crataegus monogyna	Hawthorne	50	500-700	Whips	2	0.5	2500	i iaiiciii bi capa ci c ;	light reaches the lower layers. The woodland edge should be managed in the initial five and ten
Frangula alnus	Alder Black Thorne	Seed m	ix 50% each	Seeds	Spread Seeds	evenly across t	he selecte	d areas in the spring.	years to ensure the succession is developing and then every 10 years.
Rubus fruticosus	Blackberry	7						- <del>-</del>	
Ulex europaeus	Common Gorse	25	500-700	Whips	2	0.5	1250	Plant in groups of 3-7	All saplings will be mulched to create their own microclimate increasing their chance of survival.
Viburnum opulus	Guelder Rose	25	500-700	Whips	2	0.5		Plant in groups of 3-7	

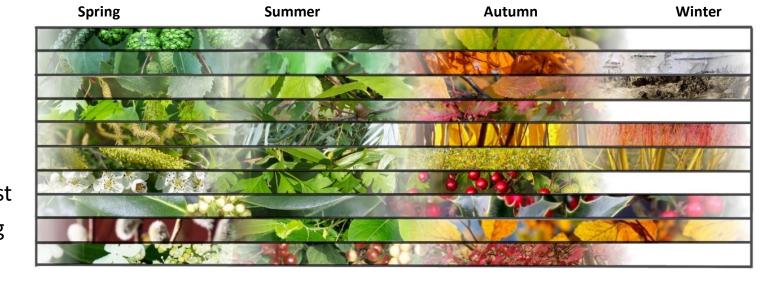
The woodland edge mix will create a naturalistic succession, connecting with the lower scrub and gently building up into the broadleaf mix creating habitats for wildlife, thus increasing biodiversity. Repetition of the ground cover, shrubs and trees create an aesthetic variation of colours and textures when viewed from the structure across the lough.



Species	Common Name	Mix %	Size (mm)	Form	Spacing (m2)	Density (m2)	Quantity	Notes	Management
Alnus glutinosa	Common Alder	25	600-900	Feathered	2	0.5	1250	Plant in groups 10-20	Plant saplings early spring in a loose grid layout and enclose the area with a rabbit and deer proof
Betula pendula	Silver Birch	25	600-900	Feathered	2	0.5	1250	Plant in groups 10-20	fence. If over time the fence is infiltrated, protect saplings with biodegradable tubes. Remove
Betula pubescens	Downy Birch	10	600-900	Feathered	2	0.5	500	Plant evenly dispersed throughout	tubes after 5-10 years depending on diameter of the base of the trunk.
Quercus rubra	Red Oak	20	600-900	Feathered	2	0.5	1000	Plant evenly dispersed throughout	Asses thinning every 10 years allowing light to come through the canopy and for trees to reach
Salix alba	White Willow	10	600-900	Feathered	2	0.5	500	Plant in groups 5-10	maturity. Younger patches of regeneration can also be selectively thinned to promote species or
Salix fragilis	Crack Willow	10	600-900	Feathered	2	0.5	500	Plant in groups 5-10	introduce new species if the selected trees are affected by the changing climate or pests and
				Shrub La	disease. At the most 10% of the planting would be thinned out every 10 years.				
Crataegus monogyna	Hawthorne	30	500-700	Whips	2	0.5	1500	Plant in groups 3-7	The Shrub layer should also be selectively thinned maintaining a diverse understory. If new species self seed and are not highly invasive, promote the growth to increase diversity and enhance the ecosystem. All saplings will be mulched to create their own microclimate increasing their chance consuminates.
llex aquifolium	Common Holly	10	500-700	Whips	2	0.5	500	Plant in groups 3-7	
Salix caprea	Goat Willow	40	500-700	Whips	2	0.5	2000		
Viburnum opulus	guelder rose	20	500-700	Whips	2	0.5	1000		

The mature broadleaf planting will create a dense canopy of bushy trees along the skyline, obscuring the coniferous crop behind. A shrub layer below will create a true forest ecosystem and become a place of exploration for visitors.

The management scheme is responsive to climate change and allows for the gradual introduction of new species into the forest in the event that the native species struggle to survive the rising temperatures and prolonged droughts.



	Mix 4 - Coniferous Crop											
Species	Common Name	Mix %	Size (mm)	Form	Spacing (m2)	Density (m2)	Quantity	Notes	Management			
Pinus peuce	Macedonian Pine	20	600-900	Feathered	2	0.5	1000		Plant saplings in late autumn/winter. Protect the area with a rabbit and deer proof fence. If			
Picea abies	Norway Spruce	20	600-900	Feathered	2	0.5	1000		infiltrated protect saplings with biodegradable tubes. Remove tubes after 5-10 years depending on the diameter of the base of the trunk.			
Pinus sylvestris	Scots Pine	40	600-900	Feathered	2	0.5			After 15-20 years of growth selectively thin 10% of trees every five years based on age, condition, quantity, distribution and light levels. This should allow time for trees to naturally regenerate the			
Picea omorika	Serbian Spruce	20	600-900	Feathered	2	0.5	1000		crop woodland in a continuous cycle.			

Accessible via tracks within the forest, the coniferous crop will create a sustainable economic profit for the area. The trees selected have been chosen based on their ability to grow in the landscapes conditions and withstand foreseeable changes in the climate, e.g. *Pinus peuce* and *Picea omorika* originating from Bulgaria and Serbia will grow on moist peaty soils and withstand both the cold winters and periods of drought in summer.

Once the current crop has been felled, the coniferous crop mix will replace it and establish a new, more resilient planting strategy.

