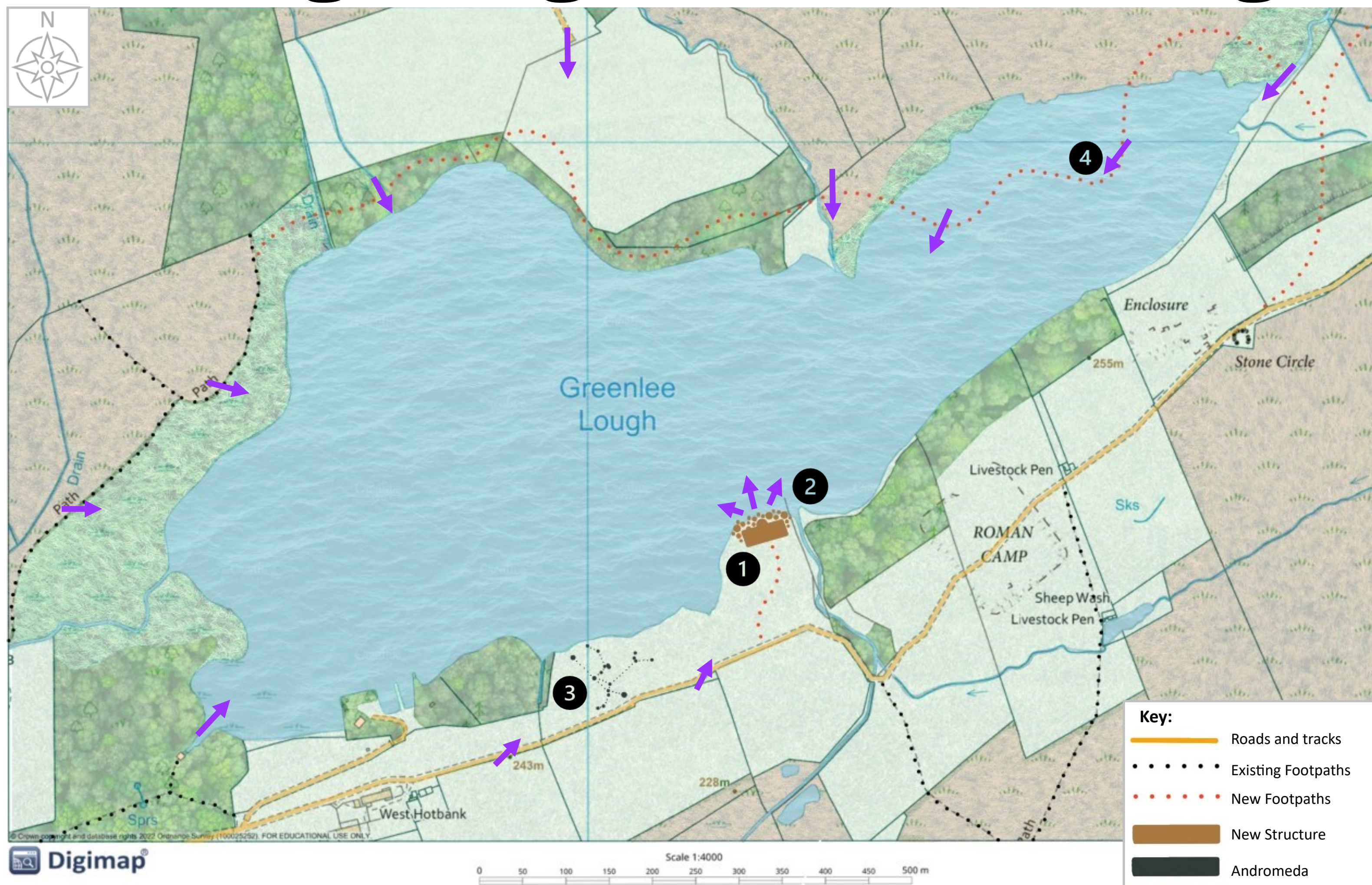


Finding Refuge at Greenlee Lough



Aims and Objectives:

- To inform visitors on the unique lough environment, a site of special scientific interest (SSSI) and national nature reserve due to its board range of wildlife and rare aquatic plants that require low levels of nutrients.
- Provide protection from the weather amidst exposed moorland.
- To create a new foot path and board walk around Greenlee lough and link it to the Pennine way allowing visitors to experience the distinctive landscape.
- Present opportunity for recreational uses such as canoeing and pond dipping.
- To engage visitors with a dark sky experience.

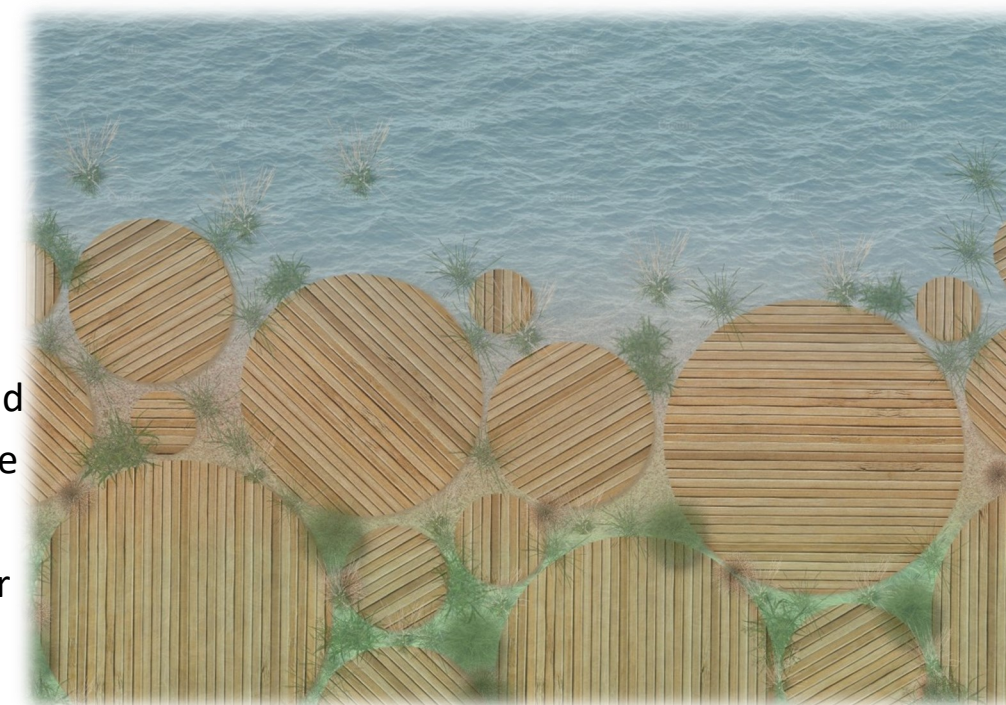
1 Shelter



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.

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 friends to feel separate in their own space whilst among others.



4 Board Walk

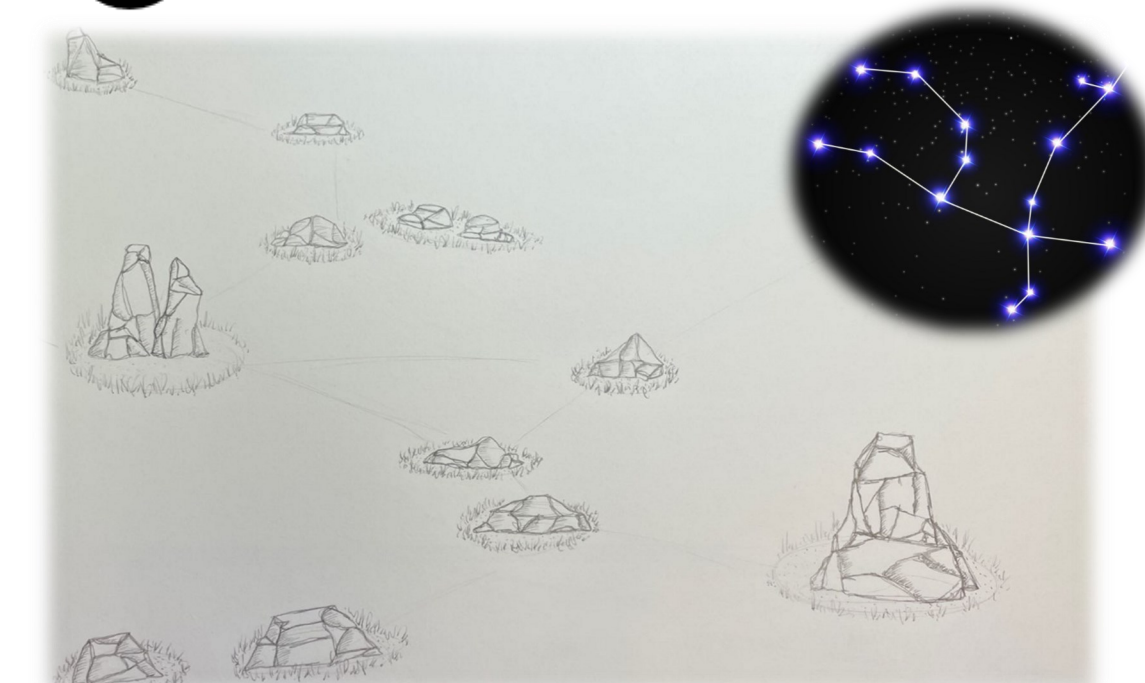


The site is situated within Northumberland National Park, north of Hadrian's Wall, surrounded by extensive moorland and occasional woodland.

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.

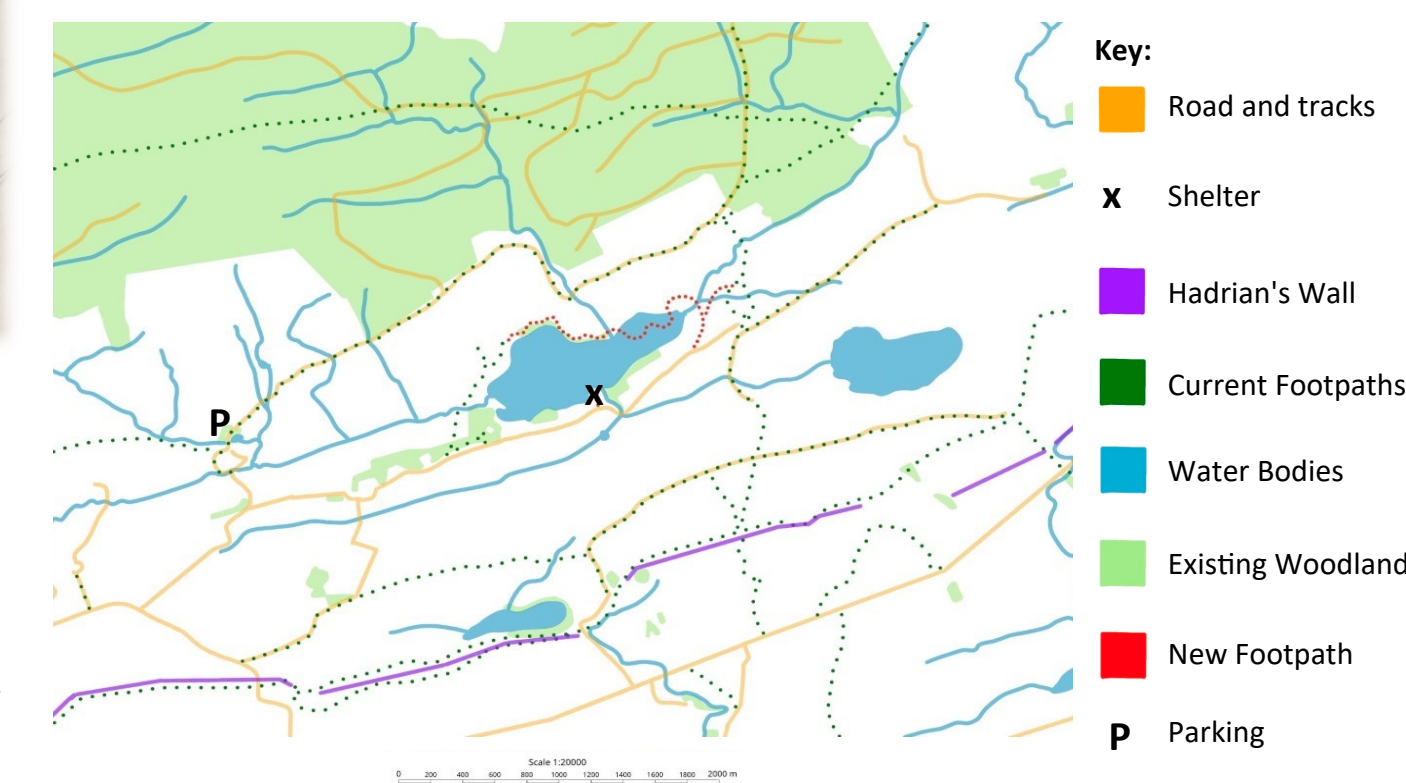
Currently there is little access to Greenlee Lough on footpaths. As a result, the new footpath will join up current footpaths and lead visitors on to a boardwalk over the lough and through the surrounding woodlands.

3 The Andromeda Star Consolation

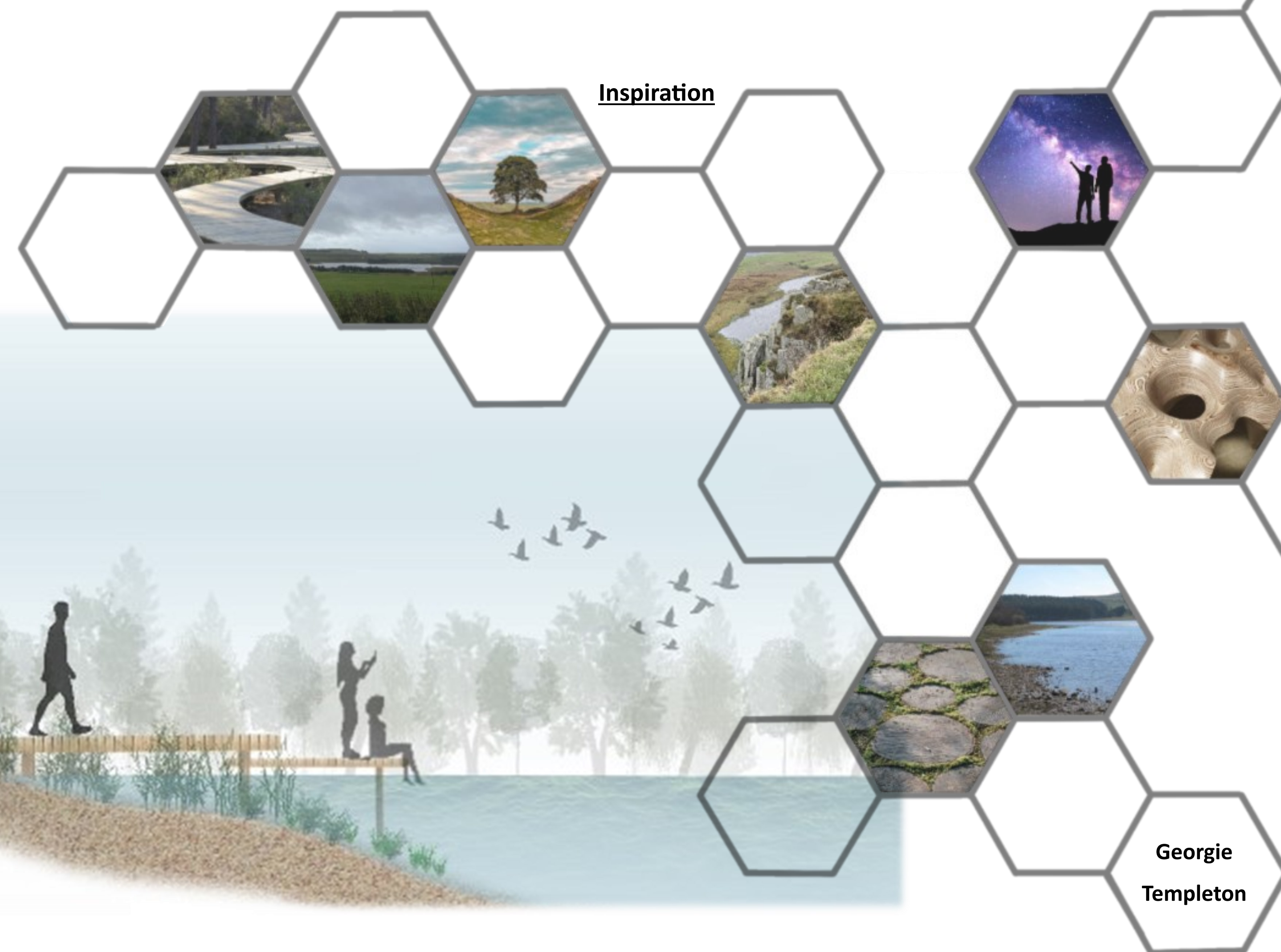


East of the shelter lie three historical sites: a roman camp, enclosure, and stone circle.

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.

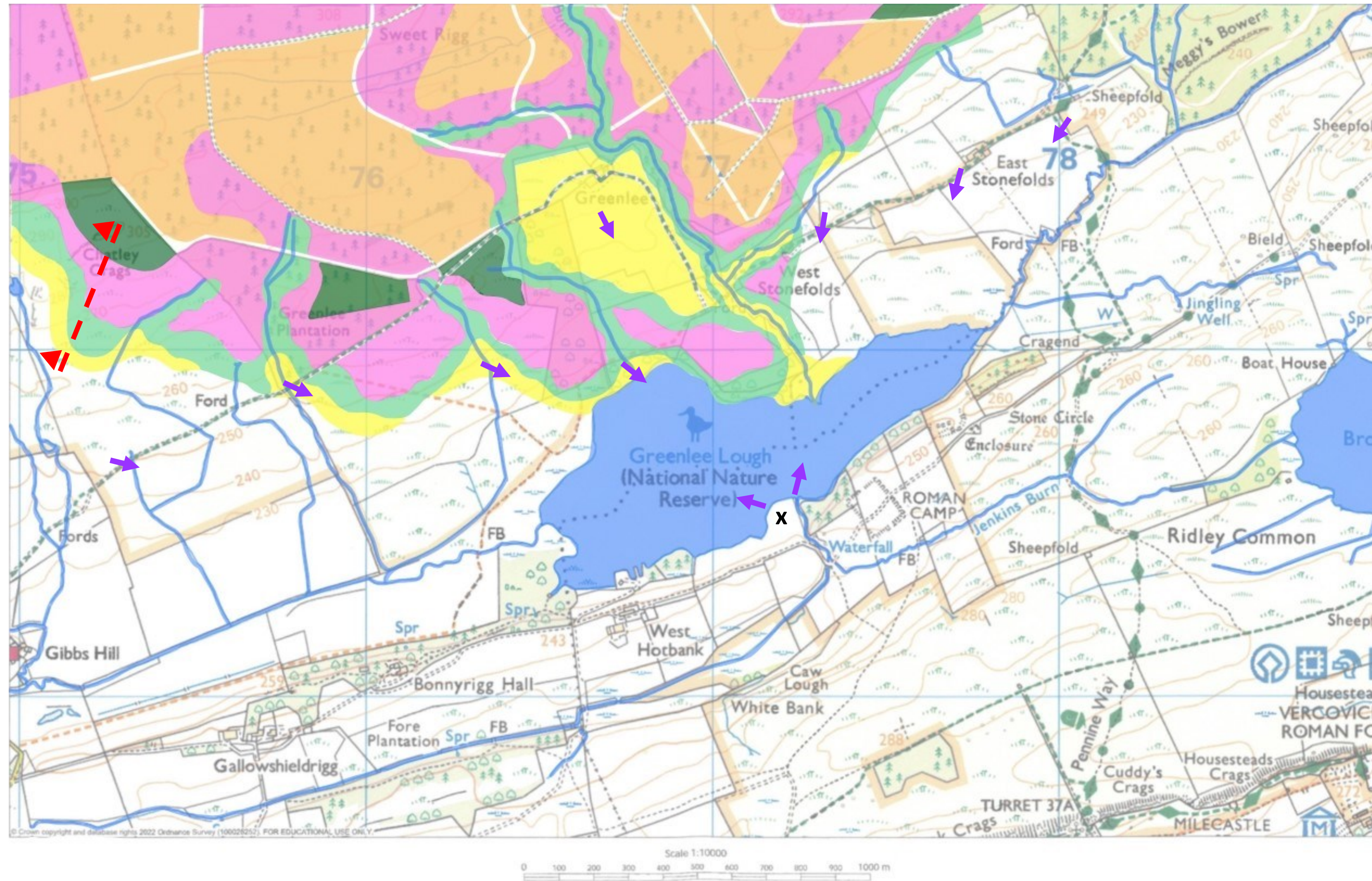


The map illustrates how the new walking route interlinks with existing roads and footpaths.



Georgie Templeton

Finding Refuge at Greenlee Lough Planting Schedule



Aims and Objectives:

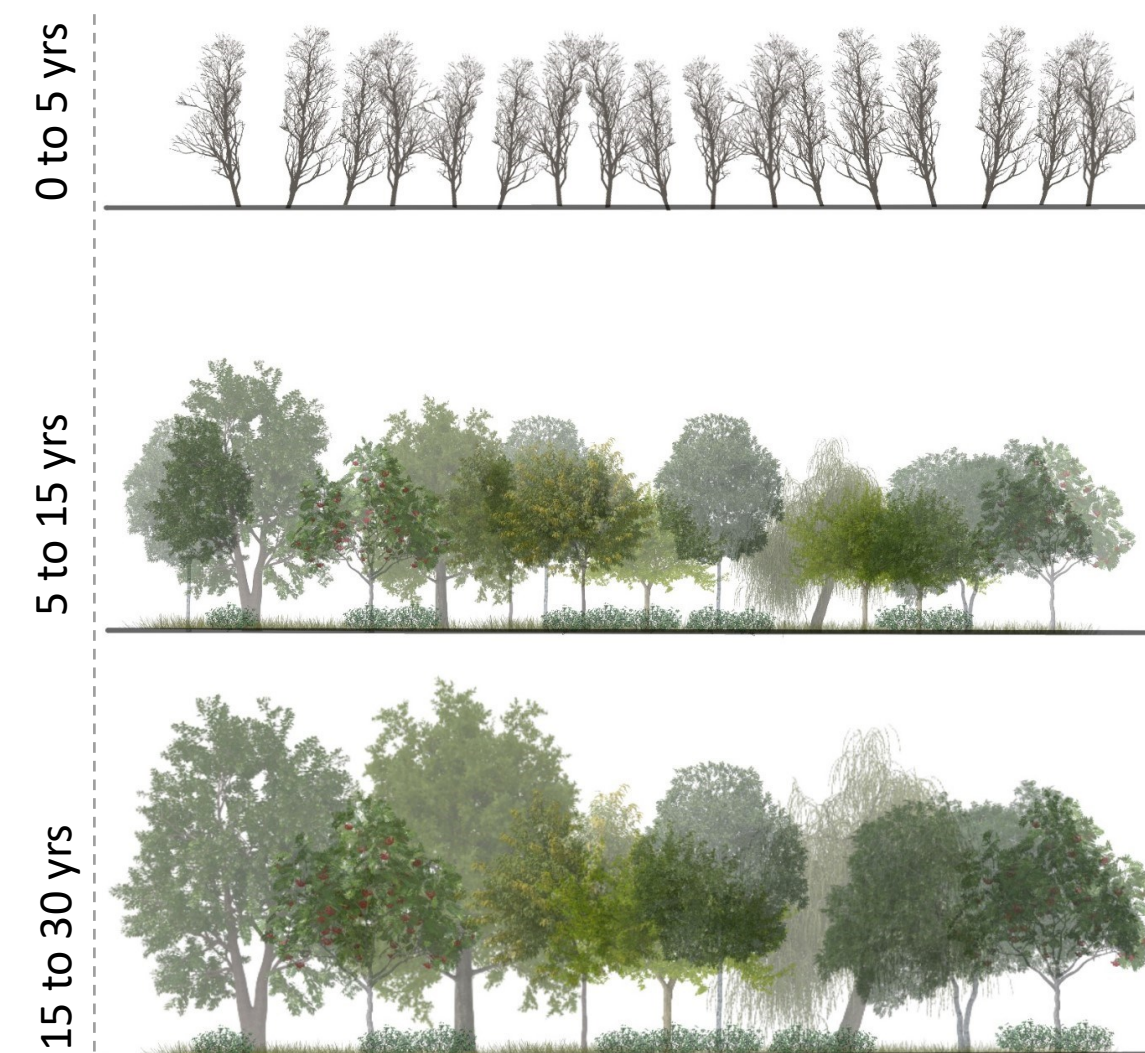
- To develop the existing Coniferous crop.
- To connect areas of existing woodland creating a cohesive and biodiverse forest.
- To create a forest planting that sits naturally into the existing landscape while directing the view towards Greenlee Lough.
- To use native species so that the special whin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

Key:

- Water Bodies
- New Coniferous Crop
- Existing Coniferous Crop
- ➔ View Points
- Mature Broadleaf
- Woodland Edge
- Scrub/Ground cover
- X** Shelter



Forecasted Growth



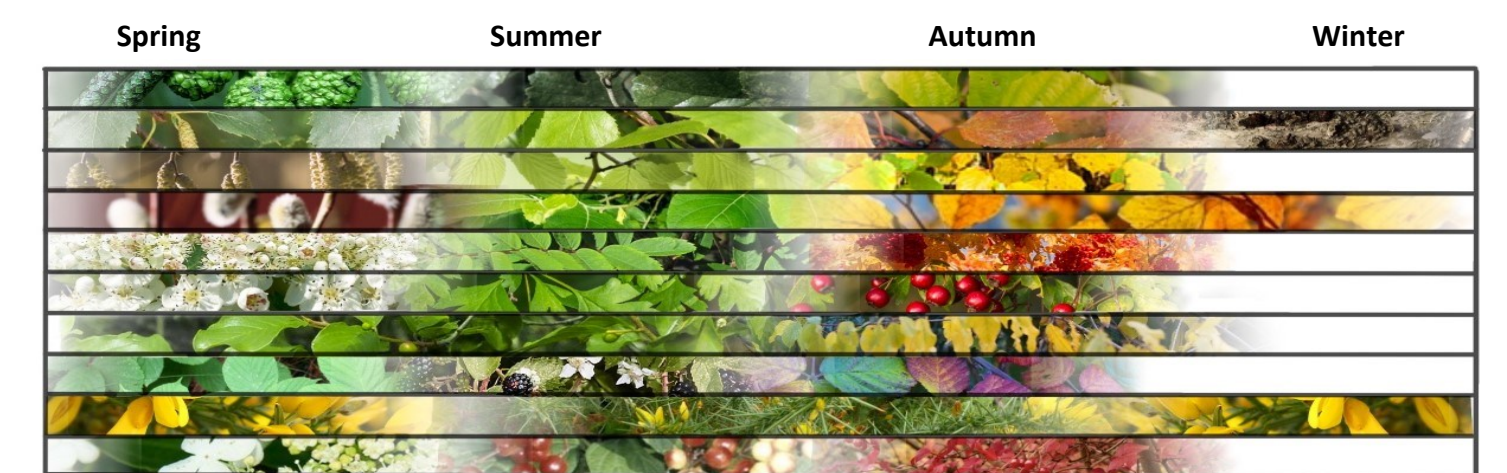
Mix 1 - Scrub/ground cover				
Species	Common Name	Mix %	Form	Notes
<i>Calluna vulgaris</i>	Common Heather	20	Seeds	The scrub area is approximately 1735m ² and will require on average 34,700g of seed mix (20g per m ²) evenly dispersed throughout the area.
<i>Fragula alnus</i>	Alder Black Thorne	15		
<i>Rubus fruticosus</i>	Blackberry	15		
<i>Native Northumberland grasses</i>		50		

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.



Mix 2 - Woodland Edge							
Species	Common Name	Mix %	Size	Form	Spacing (m ²)	Density (m ²)	Quantity
<i>Alnus glutinosa</i>	Common Alder	25	600-900	Feathered	2	0.5	1250
<i>Betula pubescens</i>	Downy Birch	10	600-900	Feathered	2	0.5	500
<i>Corylus avellana</i>	Hazel	15	500-700	Whips	2	0.5	750
<i>Salix caprea</i>	Goat Willow	25	500-700	Whips	2	0.5	1250
<i>Sorbus aucuparia</i>	Rowan	25	500-700	Whips	2	0.5	1250

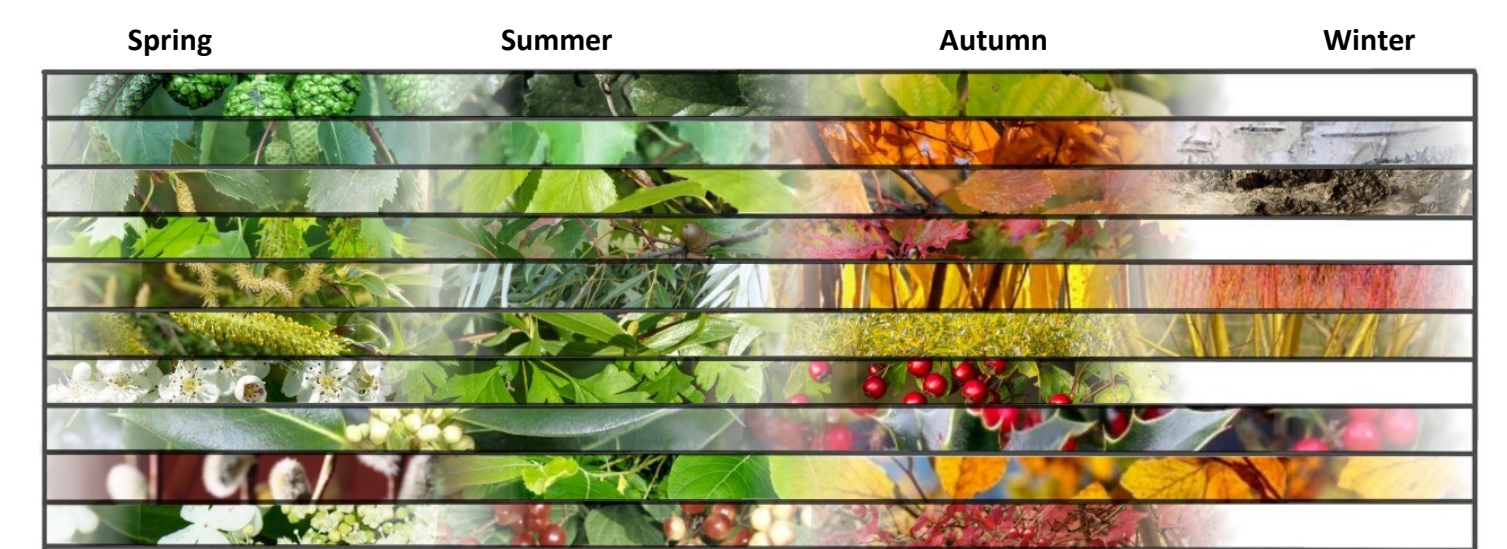
The woodland edge mix will create a naturalistic succession, connecting with the lower scrub and gently building up into the broadleaf mix creating habitats for wildlife, thus increasing biodiversity. Repetition of the ground cover, shrubs and trees create an aesthetic variation of colours and textures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



Mix 3 - Mature Broadleaf Planting							
Species	Common Name	Mix %	Size (mm)	Form	Spacing (m ²)	Density (m ²)	Quantity
<i>Alnus glutinosa</i>	Common Alder	25	600-900	Feathered	2	0.5	1250
<i>Betula pendula</i>	Silver Birch	25	600-900	Feathered	2	0.5	1250
<i>Betula pubescens</i>	Downy Birch	10	600-900	Feathered	2	0.5	500
<i>Quercus rubra</i>	Red Oak	20	600-900	Feathered	2	0.5	1000
<i>Salix alba</i>	White Willow	10	600-900	Feathered	2	0.5	500
<i>Salix fragilis</i>	Crack Willow	10	600-900	Feathered	2	0.5	500

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 (m ²)	Density (m ²)	Quantity
<i>Pinus peuce</i>	Macedonian Pine	20	600-900	Feathered	2	0.5	1000
<i>Picea abies</i>	Norway Spruce	20	600-900	Feathered	2	0.5	1000
<i>Pinus sylvestris</i>	Scots Pine	40	600-900	Feathered	2	0.5	2000
<i>Picea omorika</i>	Serbian Spruce	20	600-900	Feathered	2	0.5	1000

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.

