

Matheson Road, Garve

Nature Restoration Fund – Helping Nature 2024

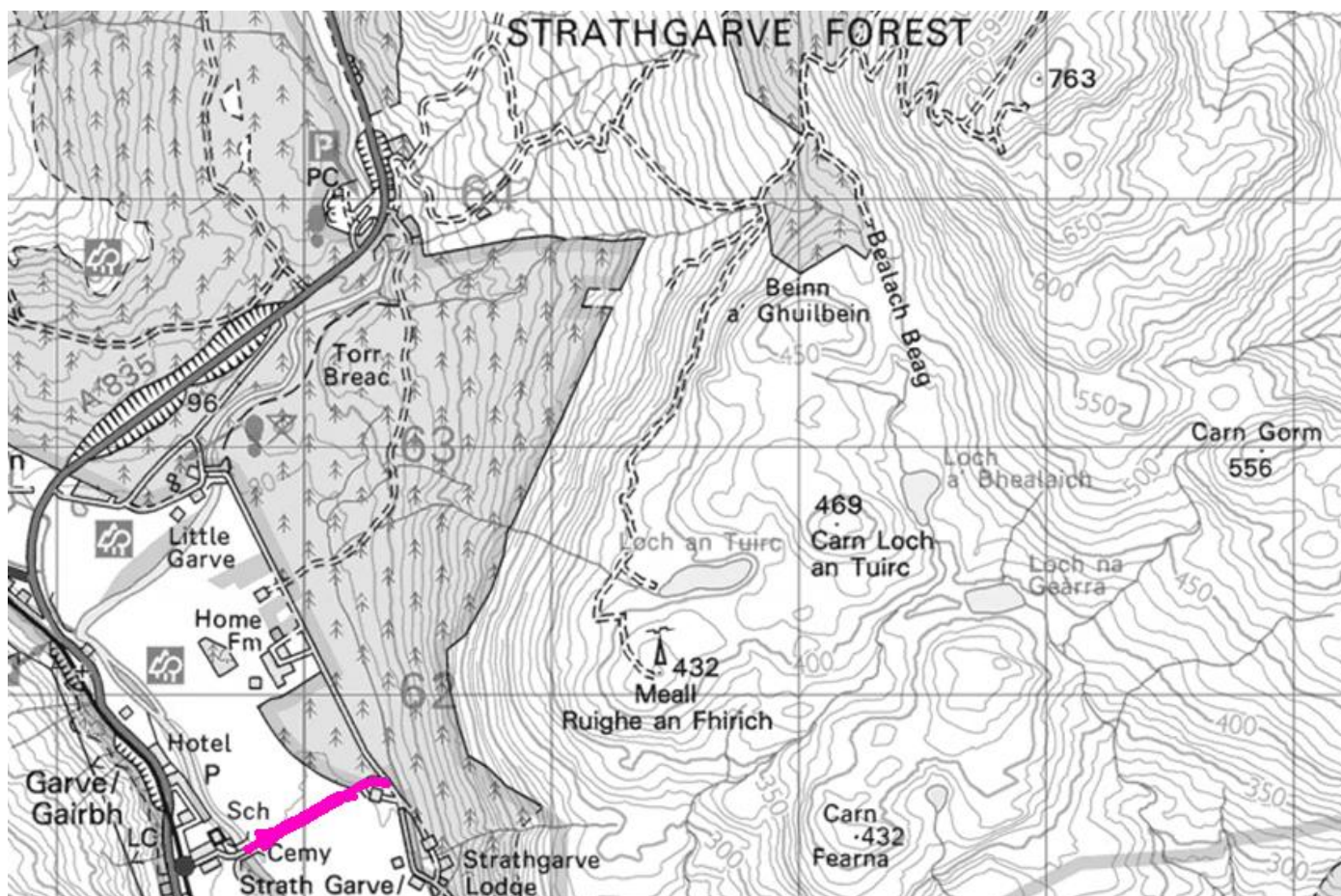
Which of the NRF priority themes and actions will be addressed?

- ☒ Habitat and species restoration: Management for enhancement and connectivity
- ☐ Freshwater restoration, including restoration of natural flows in rural catchments
- ☐ Coastal/marine initiatives to promote restoration, recovery, enhancement, or resilience
- ☒ Control of invasive non-native species (INNS) impacting on nature
- ☐ Urban: Enhancing and connecting nature across, and between, towns and cities.

Delivery partners/partnership: The Highland Council would project manage the work which would be carried out by a local contractor.

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Introduction

In May 2023, the Greenspace and Nature Networks Project was initiated to identify and implement biodiversity enhancements in biodiversity throughout the Highland Councils estate. The goal is to augment and revive nature in designated areas, fostering connectivity for species with adjacent biodiverse spaces. Aligned with the Highland Council's declaration of a Climate and Ecological Emergency, the project aspires to reinforce and enrich the environmental conditions in the Highlands region.

As part of the initial phase of this initiative, Matheson Road was identified as a plot of land suitable for biodiversity enhancements, specifically through tree planting. The objective is to fortify the existing avenue's longevity and establish a robust nature network by integrating it with surrounding native and ancient woodlands.

Site Description

The location in question is Matheson Road, a tree-lined avenue that spans from east to west, connecting Garve to Strathgarve forest. The predominant tree population consists of early mature and mature Scots pines, with occasional limes and birch interspersed throughout. In the western and central sections of the avenue, there is minimal understory, although scattered natural regeneration is present. Conversely, the eastern part of the avenue features abundant clusters of birch, pine, and rowan regeneration, influenced by the adjacent woodland recorded in the Ancient Woodland Inventory (Scotland) which records a mix of Long-established (of plantation origin) and ancient (of semi-natural origin). Additionally, the Native Woodland Survey of Scotland identifies the surrounding areas as native pinewood of young maturity, wet woodland, upland birchwood, of mixed maturity and neutral grassland.

Despite the mature wooded ambiance, the sparse understory allows for expansive views to the north and south, creating a distinctive character that should be conserved. This unique feature suggests that planting density should be slightly lower than optimal, while considering tree numbers that can successfully establish. Planting becomes imperative to ensure the continued health and longevity of this significant landscape element. The site has good drainage characteristics. Despite its low elevation, the location is highly exposed to northerly and southerly winds. Access frequency is generally low, recent developments such as the establishment of a new play park and parking at Little Garve may have led to a slight increase in vehicle activity in recent years.

A Phase 1 Habitat Survey carried out by the Highland Council Ecology Team identified three Phase 1 Habitat Survey types present on site, including boundary features. See Appendix 1, Figure 5; Appendix 2, Photo 5; and Appendix 3).

A1.3.1 Mixed Woodland (semi-natural)

Mixed woodland (semi-natural) with a sparse density covers the majority (75.5%) of the site. Trees present include a range of native and non-native species, some of which are likely to have been planted before growing to maturity. Species include birch (*Betula* spp.), rowan (*Sorbus aucuparia*), Scots pine (*Pinus sylvestris*), ash (*Fraxinus excelsior*). Tree planting could augment and extend these patches. Trees are mainly mature, but younger trees are also present. Ground flora includes a range of semi-improved neutral grassland species, including tufted hairgrass (*Deschampsia cespitosa*), ribwort plantain (*Plantago lanceolata*), and white clover.

A2.2 Scrub (scattered)

A very small (less than 1%) portion of the site contains scattered scrub, with gorse and broom present. This area lies at the western end of the site, adjacent to the road bridge over the Alltan Dubh, and is unlikely to be suitable for tree planting, due to it being isolated from the rest of the site.

J5 Other (road)

The road is covered in tarmac. It has no biodiversity value and tree planting will not impact on this habitat.

Invasive Non-Native Plants

One invasive non-native species was found on site at the time of survey, marked on Figure 1 below in yellow.

Figure 1: Site assessment



Planting Proposals

The proposed plan involves planting a combination of native trees and shrubs throughout this area. Within this woodland enhancement zone, the tree species selected will align with those already present on the site. Additionally, a variety of other native species will be introduced into the planting scheme to further enrich the biodiversity in this area. To enhance the existing mature tree-lined avenue, additional trees will be planted, set back an additional 2 meters from the road, in accordance with road safety standards. Notably, recent removal of dead and hazardous trees from this location has created a safe starting point for these site improvements.

It is important to emphasise that the site's "open" avenue-like character should be preserved when devising the tree planting strategy. As the Scots pines on the site are concentrated in specific areas, one possible

approach is to underplant with additional Scots pines to maintain these distinctive groupings and ensure a continuous tree canopy cover. Simultaneously, well-spaced, broadleaved specimen trees could be introduced in the gaps, allowing for the development of full canopies.

Figure 2: View of site travelling from Garve



Ground Preparation

In recent years a Tree Conditions Survey identified the need for felling of several trees on site which have since been removed meaning there should be little required in the means of ground preparation for this site. Before planting begins there is one rhododendron hedging plant which should be removed to protect trees from future domination of rhododendron in years to come, in addition this will provide additional space for tree planting. Low impact techniques will be used to establish areas of planted trees. No mechanical ground preparation will be used.

Figure 3: Rhododendron to be removed



Protection

The NBA Atlas provides evidence of rodent activity within this area as well as the likelihood of roe deer using this space as a wildlife corridor to nearby woodland areas to the north meaning tree protection is a necessary step within this planting regime.

The use of biodegradable Rainbow Terra Shelters supplied by Green Tech as well as a treated soft wood stake are recommended. This will help identify the position of trees for maintenance purposes and provide a protected micro-climate, accelerating establishment. The shelters will also give support for the young trees and stop them becoming suppressed and possibly swamped by the competing ground vegetation.

Successful weed control will be essential to establish the young, planted trees. Biodegradable mulch mats are the preferred protection method and should be secured around trees to allow establishment with minimum impact on environment.

Planting Specification

Considering the challenging ground conditions, it is expected that cell-grown trees will yield superior results and be more manageable to plant compared to bare-rooted stock. Our chosen contractors will endeavour to procure nursery stock from local sources, whenever feasible.

Based on an estimated site area of 1.01 hectares however due to the current trees already on site and the ability to retain the open atmosphere of the site an estimated 0.5 hectares with a planting density of 1100 stems per hectare, an allocation has been calculated for 550 trees. These should be planted in a random fashion by the contractors to mimic natural woodland, regimented planting should be avoided where possible. A mix of native tree and shrub species including species already found on-site and in the surrounding area. Additionally, a variety of other native species should be included in the planting mix to diversify this area, including those that provide habitats for pollinators. A detailed breakdown of the suggested species composition is presented below following guidance from Forest Research ESC tool (<http://www.forestdss.org.uk/geoforestdss/#>) and HC ecology team advice species can include a mix of any of the following species below with no species containing more than 40% of the mix.

The planting phase is scheduled for the winter/spring of 2023/24, with specific dates to be confirmed (TBC).

Species Composition

Planted species list includes

- **50 Crab apple**
- **50 Sessil oak**
- **50 Rowan**
- **55 Scots pine**
- **50 Sweet cherry**

Total of 255 trees.

Future Maintenance

The successful establishment of the young trees is entirely dependent on a robust maintenance programme.

An initial year maintenance contract should be secured with the planting contractor, which includes the operations listed below in Table 2.

Table 2: Maintenance Schedule

Maintenance Operation	N	D	J	F	A	M	J	J	A	S	O	N
Initial tree planting	✓	✓										
Invasives removal/thin regeneration		✓		✓		✓			✓			
Check/adjust shelters/ties				✓		✓						✓
Replace dead trees												✓

Cost Breakdown

Rainbow Terra Biodegradable Tree Shelter PRODUCT CODE: 160PS1859	60cm x 73-103mm	£472 £2.23 each
Square Soft Wood Tree Support Stakes PRODUCT CODE: 160PS2050	750mm x 25mm	£129.85 £0.49 each
Ecomatt Bio Weed Mats PRODUCT CODE: 150WW2623 Or similar biodegradable alternatives	50cm x 50cm	£249.90 (£0.90 each)
Bamboo Pegs PRODUCT CODE: 150WW2919	150mm	£60 (pack of 2000)
Scottish native tree mix (255 trees)	20-60cm range	£408
Total inc. VAT		£1318.85