Voorwoord:

Verantwoording van activiteiten zomer 2021 – najaar 2024

Doelstelling en beleid van de ANBI-stichting

Op welke wijze komt onze stichting van doestelling naar beleid en van beleid naar beleidsuitvoering en vervolgens naar uitvoeringscontrole.

Onze stichting heeft als statutair doel het herstel en beheer van natuurwaarden. Dit streven realiseren we door herstelwerkzaamheden planmatig aan te pakken en natuurlijke omstandigheden op onze natuurterreinen te verbeteren. Hierbij werken we nauw samen met overheden en deskundigen. De financiering van deze projecten gebeurt grotendeels met behulp van overheidssubsidies.

Evaluatie en verantwoording

Na afronding van elk project evalueren we de uitvoering samen met de betrokken overheid, subsidieverleners en adviseurs. Dit gebeurt in lijn met de verantwoordingsplicht die past bij een ANBI-stichting.

Natuurprojecten hebben vaak een langere doorlooptijd, omdat de natuur zich niet houdt aan menselijke planningscycli. Daarom rapporteren we over meerdere jaren om een beter beeld te geven van de voortgang en resultaten. Voor meer inzicht in onze eerdere projecten verwijzen we graag naar onze publicaties sinds 2013, beschikbaar via de filantropie-site. **Om een beter beeld te krijgen over de jaren en om niet in herhaling te vervallen, voegen wij bij deze verantwoording nogmaals ons vorig verslag van maart 2021 bij.**

Projecten

1. Wester Guisachan Estate

Na 25 jaar intensieve inspanning is het herstel van de acht plantages op het landgoed afgerond. In totaal zijn circa 1 miljoen bomen geplant met een subsidie van 1 miljoen pond. NatureScot, een overheidsorgaan, heeft inmiddels de coördinatie overgenomen van verschillende natuurdoelen, zoals CO2-reductie en veenherstel (Peatland Restoration).

Als onderdeel van deze samenwerking is een proefproject van 100 hectare succesvol afgerond. Dit project vormt de basis voor de ambitie om in de toekomst 600 hectare extra te herstellen (lees chapter 1 and 2 hieronder).

2. Het Loenerveld

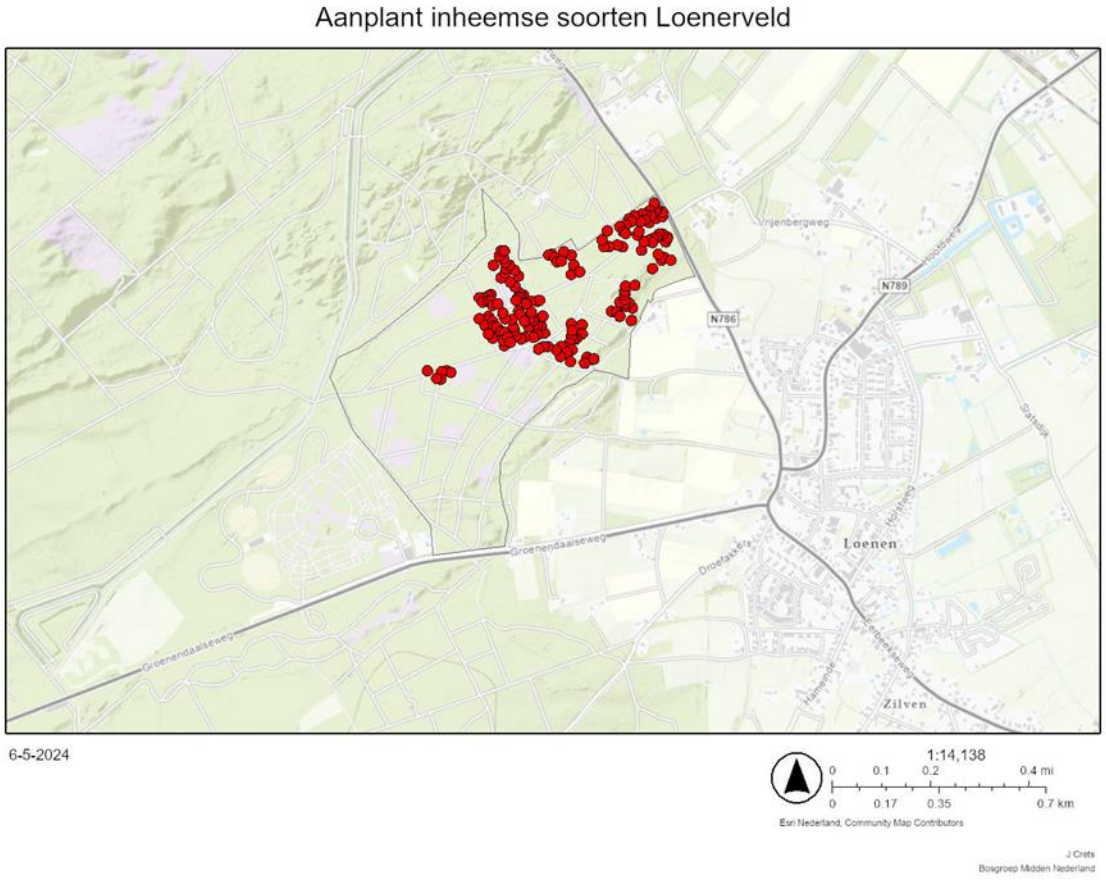
Dankzij de toegekende SPUK-subsidie van de Provincie Gelderland is de transitie van een naaldhoutgebied naar een gemengd loofbos gestart. Er worden 400 keer 30 bomen

in clusters geplant, beschermd tegen vraatschade. Daarnaast worden binnen twee rasters nog eens 4000 bomen geplant zonder bescherming.

De uitvoering gebeurt in samenwerking met omwonenden, onder begeleiding van Fa. Ebola en de Bosgroep Midden Nederland, en met steun van de provincie (lees verder hieronder uitwerking Loenerveld en SPUK actie).

3. Het Doktersbosje

Ongeveer vijf jaar geleden is dit eikenbos uitgedund. Binnenkort staat een nieuwe uitdunning gepland om de eiken meer groeiruimte te geven en verjonging van de ondergroei te bevorderen. Deze werkzaamheden werden eerder uitgesteld vanwege natte weersomstandigheden, maar we hopen dit binnenkort alsnog te realiseren.



Uitwerking Wester- Guisachan Peatland Project

Chapter 1 Peatland Restoration in Scotland: A Comprehensive Overview

Peatland restoration is the process of rehabilitating damaged peatlands to restore their ecological integrity and functions. As natural wetlands composed of partially decomposed organic matter (peat), peatlands are unique ecosystems that form under waterlogged conditions. In Scotland, where peatlands cover approximately **1.9 million hectares**—about **20% of the country's land area**—these ecosystems are integral to climate regulation, biodiversity preservation, water management, and cultural heritage.

However, human activity has left many peatlands in a degraded state, turning them from carbon sinks into carbon sources and threatening their ecological health. **Restoration** is crucial to reversing these impacts and aligning with Scotland's environmental, economic, and climate goals.

Importance of Peatlands in Scotland

Peatlands play a pivotal role in Scotland's environmental landscape:

1. **Climate Regulation**:
    - Peatlands globally store more carbon than all the world's forests combined, despite occupying a much smaller area. In Scotland, they contain **1.7 billion tonnes of carbon**, representing a significant natural asset for tackling climate change.
    - Damaged peatlands release **greenhouse gases (GHGs)** such as carbon dioxide and methane, contributing to Scotland's emissions profile.
2. **Biodiversity Hotspots**:
    - Scottish peatlands host diverse and often rare species adapted to waterlogged conditions. Examples include birds like the **golden plover** and **dunlin**, plants like **sundew** and **bog asphodel**, and invertebrates like dragonflies.
3. **Water Regulation**:
    - By storing and slowly releasing water, peatlands reduce flood risks, regulate stream flow, and improve water quality by filtering sediments and nutrients.
4. **Cultural and Historical Value**:
    - Peatlands are deeply intertwined with Scottish history and culture, forming part of the iconic Highland landscape. They also preserve archaeological remains due to their waterlogged and anaerobic conditions.

5. **Ecosystem Services**:
    - Beyond their intrinsic ecological value, peatlands support livelihoods through eco-tourism, recreation, and sustainable land use practices.

Causes of Peatland Degradation

Human interventions have significantly impacted peatlands, often transforming them into degraded ecosystems:

1. **Drainage**:
    - Peatlands were drained historically for agriculture, forestry, and grazing. Lowering the water table exposes peat to air, accelerating decomposition and carbon release.
2. **Overgrazing**:
    - Livestock grazing, particularly sheep and deer, damages vegetation cover and compacts the soil, leading to erosion and reduced peat formation.
3. **Burning**:
    - Controlled burning for activities like grouse shooting weakens the peatland's vegetation layer and disrupts its water balance.
4. **Extraction**:
    - Peat was traditionally cut for fuel or used in horticulture, directly removing the carbon-rich material and leaving degraded areas behind.
5. **Infrastructure Development**:
    - Roads, wind farms, and other developments fragment peatlands and alter their hydrology.
6. **Climate Change**:
    - Warmer temperatures and changing rainfall patterns exacerbate peatland degradation by drying out areas and making them more vulnerable to erosion.

Goals and Principles of Peatland Restoration

The primary objectives of peatland restoration are to:

- Restore the **natural hydrology** by raising water levels.
- Re-establish **vegetative cover** with native species, particularly sphagnum moss.
- Halt the release of greenhouse gases and resume carbon sequestration.
- Enhance biodiversity by providing suitable habitats for wildlife.

- Protect cultural and landscape values while offering opportunities for sustainable land use.

Restoration is guided by key principles, including **sustainability**, **local involvement**, and **evidence-based interventions**.

Restoration Strategies in Scotland

Peatland restoration projects in Scotland employ a range of strategies tailored to the specific conditions and needs of degraded sites:

1. Rewetting Peatlands

- **Blocking Drains**: Small dams made of peat, wood, or plastic are installed in drainage ditches to raise the water table.
- **Reversing Past Land Modifications**: Forestry plantations established on peatlands are cleared, and plowed furrows are filled to restore natural water flow.

2. Revegetation

- Damaged areas are replanted with **sphagnum moss** and other native plants that promote peat formation.
- Techniques like hydroseeding (spraying seeds mixed with water and nutrients) are used on large, bare areas.

3. Erosion Control

- Eroded peat surfaces are stabilized using biodegradable mats, coir logs, or heather bales.
- Natural fibers or fencing help prevent further soil loss.

4. Managing Land Use

- Collaboration with farmers and landowners reduces harmful activities, such as overgrazing and inappropriate burning.
- Restored peatlands are repurposed for eco-tourism and low-impact activities.

5. Infrastructure Removal

- Roads, tracks, and drainage structures that disrupt the peatland's water balance are removed or modified.

6. Monitoring and Adaptive Management

- Restoration sites are continuously monitored using drones, satellite imagery, and soil and water tests to assess progress and refine techniques.

Key Programs and Policies Supporting Restoration

Scotland has developed an ambitious framework to support peatland restoration:

Peatland ACTION Program

- Funded by the Scottish Government and managed by **NatureScot**, this program provides financial and technical support to landowners and communities.
- Since its inception in 2012, Peatland ACTION has facilitated the restoration of thousands of hectares of peatland.

Climate Change Commitments

- Scotland's **Climate Change Plan** includes a target to restore **250,000 hectares of peatland by 2030**, aligning with its goal of reaching **net-zero carbon emissions by 2045**.

The Peatland Code

- A voluntary certification scheme allowing businesses to invest in peatland restoration as part of their carbon offset strategies.

Collaborative Partnerships

- Projects are delivered through partnerships involving government agencies, conservation organizations (e.g., **RSPB Scotland**, **Scottish Wildlife Trust**), research institutions, and local communities.

Benefits of Peatland Restoration

Peatland restoration yields benefits across environmental, social, and economic dimensions:

1. Environmental Gains

- Prevents carbon emissions and enhances sequestration.
- Promotes the return of rare species and overall biodiversity.
- Improves water quality and mitigates flood risks.

2. Climate Resilience

- Restored peatlands buffer against climate impacts by stabilizing hydrological systems.

3. Economic Opportunities

- Creates **green jobs** in rural areas through surveying, planning, and restoration work.
- Supports eco-tourism and boosts Scotland's image as an environmental leader.

4. Cultural and Landscape Preservation

- Protects the historical and scenic value of peatlands as part of Scotland's natural heritage.

Challenges in Peatland Restoration

Despite the successes, peatland restoration faces challenges, including:

1. **High Costs**:
    - Restoration is resource-intensive and requires sustained investment.
2. **Conflicting Land Uses**:
    - Balancing restoration with agriculture, forestry, and renewable energy development can be contentious.
3. **Knowledge Gaps**:
    - Understanding the long-term outcomes of restoration under changing climatic conditions is an ongoing area of research.

The Future of Peatland Restoration in Scotland

Scotland's peatland restoration efforts are not only a vital part of the country's climate action agenda but also a cornerstone of its broader environmental and biodiversity strategies. Peatlands, which account for around 20% of Scotland's land area, are one of the most carbon-rich ecosystems in the world, storing more carbon than all the forests in the UK combined. This makes them a powerful tool in the fight against climate change. However, much of Scotland's peatland has been degraded through drainage, overgrazing, and industrial activity, causing a release of stored carbon into the atmosphere and diminishing their capacity to act as carbon sinks.

By 2030, Scotland plans to restore 250,000 hectares of peatland. This ambitious target is set to deliver a wide range of benefits: it will significantly reduce greenhouse gas emissions, help Scotland meet its climate goals, and simultaneously protect vital biodiversity and cultural heritage. Restoring peatlands is an investment in long-term environmental health, as it will not only enhance the carbon storage potential of these lands but also improve soil fertility, boost water quality, and reduce the risk of flooding in some areas. Additionally, peatland restoration creates habitats for a variety of species, including those that are rare or endangered, contributing to Scotland's overall biodiversity goals.

Moreover, peatlands have cultural significance, particularly in the Highlands, where they are tied to Scotland's historical and indigenous landscapes. The restoration of peatlands therefore supports both ecological sustainability and the preservation of cultural heritage, bridging the gap between environmental conservation and cultural preservation.

The Scottish government is committed to ensuring the success of its peatland restoration efforts by securing continued funding, fostering public support, and embracing innovative restoration techniques. These initiatives are backed by significant investments in research and the development of new tools to monitor and manage the restoration process effectively. The government has recognized that the success of peatland restoration hinges not only on the scale of action but also on collaboration with local communities, landowners, and conservationists. Public engagement is crucial in ensuring that the benefits of peatland restoration are widely understood and that local stakeholders are empowered to take part in these efforts.

Scotland's peatland restoration efforts are also gaining international attention. As climate change becomes an increasingly urgent global issue, many nations are looking to nature-based solutions for mitigating environmental damage and enhancing climate resilience. Scotland's work in revitalizing degraded ecosystems sets a powerful example for other countries facing similar environmental challenges. By demonstrating that effective land management practices can restore ecosystems, enhance biodiversity, and tackle climate change simultaneously, Scotland is positioning itself as a global leader in sustainable land use and environmental stewardship.

This comprehensive approach to peatland restoration reflects a broader, growing understanding that environmental solutions must be multifaceted and integrated. Rather than viewing peatland restoration as a standalone effort, Scotland is recognizing it as a central piece of its wider environmental strategy, one that includes reducing emissions, conserving biodiversity, and promoting social and economic sustainability. By showcasing how ecosystem restoration can benefit both the planet and its people, Scotland is setting a compelling example of how nations can work toward a more sustainable, resilient future.

Chapter 2 Peatland Restoration on Wester Guisachan Estate

The Wester Guisachan Estate, located in the Scottish Highlands within the Cairngorms National Park, is one of the key sites leading Scotland's ambitious peatland restoration efforts. This estate holds great historical and ecological significance, not only because of its natural beauty but also due to its cultural importance. The estate is part of the traditional Highland landscape and has been a focus for land conservation for many years. As part of Scotland's wider environmental goals, the restoration of peatlands on the Wester Guisachan Estate plays a crucial role in both enhancing biodiversity and helping mitigate climate change.

The restoration project at Wester Guisachan involves rehabilitating degraded peatlands that have been damaged by several factors, including drainage for agricultural use, overgrazing by livestock, and other land-use changes. These activities have disrupted the natural hydrology of the peatlands, causing peat to dry out and decompose, releasing large amounts of stored carbon into the atmosphere. The loss of this carbon storage capacity not only exacerbates climate change but also contributes to a decline in biodiversity as the land becomes less hospitable for a range of native species.

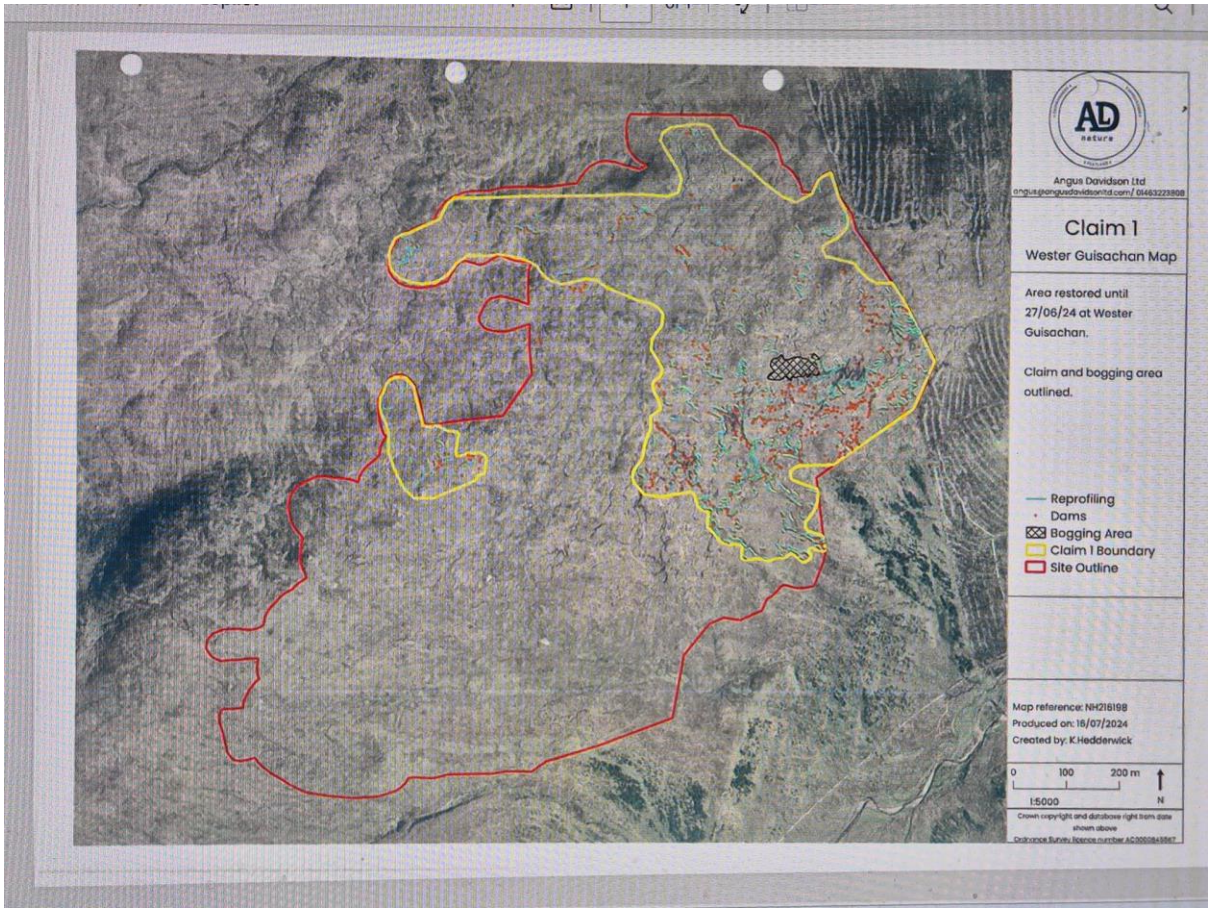
Restoration efforts at the estate focus on several key interventions designed to reinstate the natural functioning of the peatland ecosystem. These include blocking existing drains to raise water levels and rewet the soil, which is essential for preventing further carbon loss. Reintroducing native vegetation, such as sphagnum mosses and other wetland plants, is another critical aspect of the restoration process. These plants help to trap and store carbon, encourage the return of wildlife, and contribute to the overall regeneration of the ecosystem. The goal is to allow the peatlands to return to their natural state, thereby reestablishing their role as carbon sinks, improving water quality, and enhancing habitat for a diverse range of species.

Beyond its climate and ecological benefits, the restoration of the Wester Guisachan Estate's peatlands also offers valuable contributions to the local community. By improving water retention in the landscape, the project helps mitigate the risk of flooding, which can be a significant problem in the area, particularly during heavy rainfall events. The rewilding of the estate is also expected to provide opportunities for ecotourism, educational outreach, and local employment, creating economic opportunities alongside environmental gains.

This project is part of Scotland's broader ambition to restore 250,000 hectares of peatland by 2030, a key initiative in the country's efforts to reach net-zero emissions and enhance biodiversity. The restoration of peatlands across the country is seen as one of the most effective and cost-efficient ways to sequester carbon, with the potential to make a significant contribution to the fight against climate change. By demonstrating how large-scale peatland restoration can work on the ground, the Wester Guisachan Estate project is a key example of how such efforts can be both environmentally beneficial and economically viable.

Moreover, the restoration of peatlands at the Wester Guisachan Estate is part of a larger trend of focusing on natural solutions to tackle environmental issues. Scotland's approach emphasizes the importance of restoring and protecting ecosystems as a means of combating climate change while also enhancing biodiversity and supporting local communities. As such, the Wester Guisachan Estate's peatland restoration project is a valuable model for other areas, both in the UK and globally, where degraded peatlands are common. It exemplifies how land stewardship, informed by science and collaboration, can regenerate ecosystems, restore natural processes, and contribute to long-term sustainability.

Ultimately, the restoration of peatlands at the Wester Guisachan Estate is not just about restoring a single ecosystem, it is about contributing to a national and global effort to reverse environmental damage, support biodiversity, and combat climate change. By investing in these natural systems, Scotland is working toward a more sustainable and resilient future for both its people and its planet.



Summary: Progress and Claim Form (2023-24)

Project Overview

- **Project ID**: 502557
- **Funding Recipient**: Wester Guisachan Estate
- **Project Title**: Druim a' Choilich

This progress form reports on restoration activities for the reporting period **20 May 2024 - 27 June 2024**, fulfilling the grant's monthly reporting requirements to assess project progress and costs.

Progress Details

- **Completion Progress**:
  - **34.2 hectares** of the 100-hectare site restored (34% completed).
  - Restoration included the **reprofiling of 4,974.22 meters** of haggs and installation of **1,241 peat dams**.
  - Raised water tables and newly forming pools observed in restored areas.
- **Key Milestones**:
  - Contractors have progressed significantly but faced minor challenges, including inaccessible soft peat areas and two bogging incidents.
  - Incidents included a hydraulic fluid spillage, fully documented in an interim report.
- **Expected Completion**:
  - Full completion and expenditure anticipated by **31 March 2025**, with no immediate delays threatening the timeline.

Acknowledgment of Funding

- **Promotion Efforts**:
  - Project highlighted on the website: https://adlnature.com/.

Costs and Grant Claim

- **Total Spend this Period**: £31,981.24
- **Breakdown**:
  - Reprofiling: £14,425.24
  - Peat Dams: £9,928.00
  - CDM/Health & Safety: £1,400.00

- Mobilization: £3,000.00
- Project Management: £2,500.00
- Interim Report: £500.00
- Mileage: £228.00

Invoices for claimed costs have not been provided, with prior approval sought for early payments due to financial bridging issues.

Required Documentation

- **Submitted**:
  - Progress reports
  - Geo-referenced photographs
  - Spatial data
  - Evidence acknowledging funding
- **Pending**:
  - Final Report (required for final payment claim).
  - Peat depth and condition surveys within a month of the start or first claim.

Declaration

The progress report was signed by **Angus Davidson** on **16 July 2024**, affirming the accuracy of financial and project details.

For queries, recipients are directed to their funding officer or the official email (**peatlandactiongrant@nature.scot**).

Summary: Environmental Registry Communications Agreement

Parties Involved

- **Project Proponent**: Stichting Herstel En Beheer Natuurwaarden
- **Authorised Representative**: Angus Davidson Ltd, a private company based in Inverness, Scotland.

Purpose

This agreement, effective **January 1, 2024**, establishes the authority of the Authorised Representative to act on behalf of the Project Proponent in communications and actions related to the **UK Peatland Code Registry** for the **Wester Guisachan 1 [Druim a' Choilich]** peatland restoration project.

Uitwerking project Loenerveld

Over de SPUK-subsidie

De SPUK-subsidie (Subsidie Provinciale Ruimtelijke Kwaliteit) is een belangrijke financiële steunmaatregel van de Provincie Gelderland. De subsidie richt zich op projecten die biodiversiteit, bosherstel en natuurverbindingen bevorderen. Voor het Loenerveld wordt deze subsidie specifiek ingezet om de overgang van naaldhout naar gemengd loofbos te realiseren, met positieve effecten voor biodiversiteit en het ecosysteem.

Update: Aanplant en Rasterwerkzaamheden

Hierbij een overzicht van de huidige voortgang en planning voor de aanplant en rasterwerkzaamheden. In de bijlage vindt u kaarten die de voorgestelde maatregelen visualiseren.

Aanplant: Aantal klumpen en stuks plantsoen

- Er zijn 363 klumpen in het veld ingetekend, goed voor 9065 stuks plantsoen.
- Binnen de rasters wordt aanvullend 2656 stuks plantsoen geplant, naast de natuurlijke verjonging die daar zal ontstaan.
- Dit brengt het totaal op 11.721 stuks plantsoen die we gaan aanplanten.

Rasterwerkzaamheden: Totale lengte

- In totaal is er 1967 strekkende meter raster uitgezet, verdeeld over drie locaties op het terrein.

Bodemonderzoek en soortensamenstelling

Uit de bodemboringen blijkt dat de bodem grotendeels bestaat uit holtpodzol en haarpodzol, typerend voor de arme zandgronden van de Veluwe. De pH-waarde varieert tussen 4 en 5, wat voor de Veluwe normaal is, maar ons wel beperkt in de keuze van boomsoorten.

Om de biodiversiteit en toekomstige bosstructuur te bevorderen, stel ik voor om naast boomvormers ook struikvormers aan te planten. Een verhouding van 80% boomvormers en 20% struikvormers lijkt ideaal.

Voorgestelde boomsoorten

- Tamme kastanje
- Fladderiep
- Geoorde wilg
- Wintereik
- Winterlinde

- Haagbeuk *(geschikt voor experimenten ondanks iets hogere bodemvereisten)*
- Beuk
- Grauwe els *(idem)*

Voorgestelde struiksoorten

- Eenstijlige meidoorn
- Sleedoorn
- Wilde appel
- Hulst
- Trosvlier

Door deze combinatie creëren we een meerlagig bos dat bijdraagt aan een gevarieerde en duurzame bosontwikkeling.

Rasters Loenerveld