

Cluny Hill Woodland

MANAGEMENT PROPOSALS – a 10 YEAR PLAN

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INTRODUCTION

Cluny Hill Woodland Management Plan was commissioned by **The Moray Council** (**TMC**) in partnership with **Forres Green Spaces Group** (**FGSG**). The Plan concepts were developed with community input and includes representation from Moray Council as well as community groups with an interest in Cluny Hill, (such as Forres Community Council, Forres Features and Forres in Bloom).

A long- term plan was identified as a key priority during the 'Forres 2020 Vision – Planning for real' community engagement exercise. A collaborative approach has been successful for the plan progression.

Cluny Hill Woodlands are situated within the town of Forres at grid reference NJ 045 589 adjacent to Grant Park. The origins of the woodlands are the result of various planting projects since the late 1790's. By the late 1800's woodland seems to have been established over much of Cluny Hill.

Cluny Hill is publicly owned and is managed by TMC as a well-regarded resource by the local community for recreation, tourism, and education. The area is seen as 'a natural' habitat within the town of Forres. The Core Footpaths on the Hill link into a wider network of footpaths around Forres. In summary the area has great historical, landscape, and amenity value as well as ecological, recreational, and educational value.

Man-made Features of note in the Cluny Hill area: Nelson's Tower, the Hilltop Enclosure, Cluny Hill Cemetery, Water Reservoir, Findhorn Foundation Cluny College, Cycle Skills area, Helge's, or Hells Hole- called Cluny Hill Hollow here in alignment with Prof Isaksen's report referenced below.

Tilhill Forestry are occasionally employed by Moray Council to give advice on Forestry and tree related matters.

There is a requirement to create a management plan to help to coordinate management activities within the Woodlands in the coming years based on consultations with The Moray Council and stakeholders. **It is noted that TMC has limited resources for woodland management** and the Plan is seen as a tool to guide work when resources become available, either from TMC and/or the local Community who will also be key in delivering the objectives within this Plan

During the Consultation Process it was realised that there were 'layers' of sometimes conflicting cultural, historic, and regulatory considerations which were not apparent at the start of the consultation process. The forestry element is critical in providing the environment within which the other stakeholder activities take place, however it is recognized that due consideration must be made for other activities and interests within this Plan.

Location and Boundary Map





THE CONSULTATION PROCESS AND RESULTS

Cluny Hill Woodland Management Plan Consultation Summary

In the initial stages of the long-term plan creation, residents were invited to contribute at three rounds of public consultation and at various Green Spaces meetings.

A public session at the end of 2019 was followed by two online consultations in April 2021 hosted by Forres Area Community Trust and Forres Online after a Covid induced hiatus during 2020. There were also ongoing Forres Green Spaces Group meetings during 2021-22.

Additionally, there were site and online meetings with the new Cluny Mountain Bike Group during 2021-22.

The tables below summarise the views from those face to face and online engagements, which broadly agreed with and strengthened the perceptions taken from previous consultations. Changes were made to the **Concept Map** as a result.

The final Cluny Hill Woodland Management Plan will be a partnership document and to be fed back through the Forres Green Spaces Group, as will updates and reporting.

This will be a 10-year Plan with a review and an update at the end of 2027. The first 5-year period will have an associated works plan. The second 5-yr period will be considered very briefly in the 'Monitoring' section. The 2027 review will build on progress from the first 5-yr phase and deliver the detail for the second 5-yr phase.

Resourcing: With limited financial resources available, the delivery of the plan will require a partnership approach between Moray Council and local community groups to deliver some of the actions. Some fundraising may also be required as part of this. In addition, there may be the opportunity for small amounts of income from the commercial felling zone to be reinvested back into the management of the Cluny Hill Woodlands - subject to discussion and approval of Moray Council.

See also Moray Council Corporate Plan for the wider area perspective beyond Cluny Hill : <u>http://www.moray.gov.uk/downloads/file119976.pdf</u>)

The Consultation feedback can be summarised under four broad themes:

 TREE MANAGEMENT & MAINTENANCE Minimise dramatic change Need to save suppressed oaks Protect veteran specimen trees Manage beech, sycamore & laurels Manage unsafe trees Leave deadwood to benefit biodiversity Planting of lower growing species Protect young plants from roe deer Manage trees as a mosaic across the Hill, with different areas managed with different priorities. (Management activities for Years 1-5 will be set out in the final Plan) 	 VISITORS & FEATURES Cluny Hill should be accessible for, & enjoyed by all ages & user groups Nelson's Tower- make it more visible, & support lighting up of the Tower Make more use of tree stumps and felled/ fallen trees, e.g., wood carvings, outdoor gym, play area
 Work in partnership with local community groups on specific projects Work with Forres Rotary Club to manage and maintain Hell's/Helge's Hole and develop arboretum Work with a short-term working group of local mountain bikers, to develop an approved trail plan, in areas identified on the revised concept map 	 SIGNAGE Work in partnership with other groups and plans to align & develop Cluny Hill signage Connect with Forres Features, Forres Heritage Trust, Forres Area Forum & other groups developing signs locally

Results – Concept Map



KEY:

BE/OK – Beech /Oak mix LAR/MC/MB – Larch/Mixed Conifer/Mixed Broadleaves Mix OG – Open Ground Mon – Monument SP – Scots PineSP/CP – Scots Pine/Black Pine Mix UP – Unproductive ground (i.e., has potential for trees but not planted)

One of the significant results of the consultation process was the consideration of an archaeological feature on top of the north hill where Nelson's Monument stands.

The Hilltop Enclosure

The introductory section of a paper published by Professor Leif Isaksen is reproduced in Appendix 2 as a route into his research on the remains of a potentially important structure on the top of the north hill of Cluny Hill where Nelson's Monument stands.

It is strongly recommended that readers access this document, as the report has a large amount of very interesting historical detail about Cluny Hill, all of which was carefully researched and sifted from esoteric archives. The report is a fascinating insight into the detective work that was done to discover how and why a potential Hilltop 'Fort' all but disappeared from public consciousness over the last 200 years and why it is important now to revive awareness of this artifact and its significance, and why it requires protection and further archaeological investigation. There are helpful summaries at the end of each section in the report.

There was follow up work by an archaeological community excavation in 2017 and 2018, by volunteers and students under supervision of the Cluny Hill Dig Team led by Prof Isaksen, and a summary was reported in the publication 'Discovery and Excavation in Scotland' (DES) by Michael Sharpe of the Dig Team, which again is a highly recommended read, a copy is presented in Appendix 3. These excavations confirmed the presence of the extensive enclosing ditch, and that it provided evidence that it had been occupied and used for metal working during the Iron Age in two distinct phases 750-400yrs BC and 390-200yrs BC (i.e., 2000-3000yrs ago). The evidence of grains and animal enclosures suggest domestic occupation along with iron working. Postholes were found but the Enclosure's status as a defensive structure is unclear. The size and hilltop location of the structure, along with potential for discovery of evidence from further back in time (Bronze Age) sets it apart within the Iron Age sites within the region.

Evidence is building that the Hilltop Enclosure is a regionally important feature of the hill. It is proposed here that tree cover within the enclosure area be gradually reduced over successive 5-year phases, by removing the smaller naturally regenerated trees (especially Beech and Sycamore) and plantation conifer to gradually leave widely spaced large specimen trees. This will improve access for scientific study and visual interpretation, perhaps so that the area can become an educational resource and local attraction.

With increased study and evidence of the Enclosure's importance, a move to a more Parkland style of tree cover with few large specimen trees would make sense as this would also emphasise the presence of Nelson's Monument on the hill, which is also of national historical interest and probably more in keeping with the original intent of those who built Nelson's Monument. This gradual approach would be in keeping with the views expressed by the consultees and minimise the impact of operations within the enclosure. Note that initially there may be strong vegetation growth from light demanding species dormant within the seed bed when the existing canopy is opened. This can be managed through time to suit management objectives.

Note also that the research also finds an association between the enclosure and what may be the site of a camp in Cluny Hill Hollow (Hells/Helge's Hole). The report suggests that archaeological investigations should also include this area.

A link to the Professors report is provided below and see the 'Introduction' section of paper in Appendix 2.

Hyperlink to Prof L. Isaksen's Paper:

https://eprints.lancs.ac.uk/id/eprint/85498/1/Cluny.compressed.pdf

Cluny Hill Hollow (aka Hells or Helges Hole)

The Cluny Hill Hollow is a natural depression surrounded by the cluster of Cluny Hills.

This is a locally well-known area that has several pieces of folklore associated with it.

It is known that a skeleton was found there in 1825 which is possibly the remains of a suicide c.1810 or an alternate story is of a soldier shot for desertion.

Locals fondly remember the shinty matches held there which may have some association with the vernacular title 'Hells Hole'.

There are some unusual trees growing in the Hollow courtesy of Mr Donnie Williamson who was an owner of T.W. Christie's Nursery (Forres) and who planted them for the benefit of the town and residents.

At present The Forres Rotary Club have stepped forward to take on management of this area which is now a mini arboretum. A survey of the trees and vegetation was conducted in 2021 (see below) which was extremely useful in identifying some of the less common species there.

It has been proposed that removal of some of the more aggressive and inappropriate plants regenerating there (bamboo, cotoneaster) will be cleared out to open the area up.

There have been some minor issues with fires and vandalism there but the Rotary hope that if it is tidied and managed the issues will resolve themselves and they are taking on these works themselves- and should be applauded.

Note that Cluny Hollow is within the **Conservation Area**.

Note also that there may be an archaeological connection with the Hilltop Enclosure in that the hollow may have had a camp there. See the 'Hilltop Enclosure section'.

HELL'S HOLE JULY 2021

Initial vegetation survey by Howard Stollar & Mick Drury.

This is an initial survey, listing just those plants that could be identified. A specialist or specialists will be needed to identify particular groups, e.g., the rhododendrons.

If the interest of the 'arboretum' at Hell's Hole is to be maintained and indeed enhanced for the future, work needs to be undertaken to control invasives and remove or control some of the dominants. Otherwise, many of the rarer and unusual species will be unable to flower, be overwhelmed or will not grow into shapely mature shrubs or trees. Arguably there are too many species packed into this area ... further survey and a plan would be essential to highlight those of particular interest to retain for the future.

Trees and Shrubs.

Acer japonica. Amur maple. Mature, varied species, some valuable specimens threatened by overbearing shade from mature sycamore and beech.

Acer platanoides. Norway Maple. Frequent, mature, several sub-species.

Acer pseudoplatanus. Sycamore. Some mature trees shading out rarer species, needs removal, controlling,

Aesculus parviflora. Bottlebrush buckeye.

Aralia sp. Spikenard. Large shrub.

Berberis darwinii. Barberry. Plus, sub-species small and large leafed. Frequent. *Betula spp.* Birches. Frequent and self-seeding.

Castanea sativa. Sweet chestnut.

Cotoneaster spp. Frequent, various species mainly self-sown? Needs light control. *Corylus avellana, C. purpurea.* Hazels. Self-seeding.

Crataegus spp. Hawthorns.

Eucryphia sp.

Fagus sylvatica. Beech. Green and purple, mature trees and self-seeding saplings. *Fuchsia sp*.

Hypericum spp. Various.

Ilex aquifolium and *subspp*. Hollies, plain and variegated.

Kerria japonica. Japanese rose.

Laburnum anagyroides and alpinum.

Ligustrum spp. Privets. Large and small-leafed varieties.

Liriodendron tulipifera. Tulip tree.

Malus spp. Crab Apples.

Prunus spp. Trees and shrubs, varied.

Prunus laurocerasus. Laurel. Dominant and spreading, needs controlling

Rhododendron spp. Specialist identification needed. *R. ponticum* needs removal. *Sambucus spp.* Elders.

Sasa veitchii. Veitch's bamboo. Invasive.

Sorbus aucuparia and other spp. Rowans, frequent, self-seeding.

Sorbus intermedia. Swedish whitebeam.

Symphoricarpus alba. Snowberry. Dominant in places, needs controlling.

Taxus baccata. Yew. Needs rescuing from other overbearing trees

Tilia platyphyllos 'Rubra' and *T. x europaea*. Limes.

Viburnum spp.

Thuja plicata. Western red cedar. Seedlings and saplings need controlling. *Ulmus glabra*. Wych elm, many dead and dying.

Ground flora and herbaceous, climbing plants.

Lamium galeobdolon subsp argentatum. Yellow archangel. Invasive.

Lonicera periclymenum and other *spp*. Honeysuckles.

Rosa rugosa. Rugosa rose.

Rubus chingii suavissimus. Chinese blackberry. Invasive.

Rubus Cockburnianus. White-stemmed bramble.

Volunteer Groups Active on and Around Cluny Hill

1. The Forres Green Spaces Group (Umbrella Organisation consisting of groups below)

- 2. The Forres Rotary Club
- 3.Forres Features
- 4.Forres Community Council
- 5.Forres Heritage Group
- 6.Forres Mountain Bike Group
- 7.Forres in Bloom (Grant Park)
- 8.Forres Footpaths Trust



(Photo – 'Smoky' The Cluny Dragon near Nelson's Tower -Forres Features)

The Mountain Bike Skills Area

When Covid lockdowns eased at the end of 2020 and early 2021 it was noted that a group of enthusiastic mountain bikers (MTB) were building unauthorized trails and jumps on Cluny Hill and coming into conflict with other user groups.

The Moray Council (TMC) have made it clear that any new jumps will need to minimise risk to the public and to The Council and that planning permission will be required before construction.

However, TMC and Forres Community Council also chose to engage with the bikers to see if a mutually beneficial arrangement could be found to allow controlled activity in an agreed area. During April 2021 meetings were arranged between unofficial organisers within the MTB community and Council representatives (including Tilhill). During 2021 and 2022 key issues were addressed to satisfy health and safety requirements and insurance for the group via Forres Sports Hub and a site to build runs and jumps agreed in the Scots Pine stand in Compartment 3. The plans had to be approved by Moray Planning Department so that an agreement was reached whereby thinning the trees on a **Shelterwood** model to achieve natural regeneration would also allow space for the bikers to create the necessary runs and jumps. The locations of the runs may change over time as the participants modify existing layouts within the controlled managed area above Clovenside Road.

Please see maps and initial proposals developed by the MTB group below.

An agreement has been prepared (but not yet agreed at time of writing) between TMC and the group which is active under the auspices of the Forres Community Sports Hub to obtain cover through TMC insurance. – please see a copy of this agreement in appendix 3

NOTE See C Palmer email and Archaeological concerns during jump construction in Appendix 2.

Cluny Bike Skills Area



Cluny Hills is split into 4 separate hills.

- 1. North West: Nelsons Tower
- 2. South West: Clovenside Cemetery
- 3. South East: Water tower
- 4. North East: Proposed sight for bike skills area



The map from morayways website of the Cluny Hills illustrates that the proposed location does not infringe any of the current footpaths or the Cluny Hill walk

Ref: https://www.morayways.org.uk/routes/forres-clunyhill-path/

The intention is to keep the bike skills area inside the footpath marked in 4.

The skills area shall accommodate all skill levels, allowing for the greatest diversity of riding abilities to enjoy the facility.

Cluny Bike Skills Area



All the trails would be confined within the current walkers path identified on the map beside.

To be as inclusive and diverse as possible the following trail types are proposed:

- 1. Blue Beginners pump line
 - · Intended to provide a gravity fed learning route for all ages to learn, enjoy and sharpen their skills.
- 2. Red Intermediate and fun line
- 3. Red Dual Slalom and fun line Intermediate to Advanced fun line
- 4. Orange Jump line for skilled riders to progress too from the Red line (2)

Example:

https://www.highlandmountain.com/explore-highland/park-info/skills-and-jump-park-zone/









LONG TERM VISION

For Cluny Hill to offer multiple public benefits so that locals and visitors can enjoy a peaceful environment which promotes health with social and environmental benefits.

A system of good quality footpaths will facilitate access and enjoyment.

To preserve and enhance Cluny Hill's valuable historic, cultural, and recreational resources to benefit the local and wider community in perpetuity.

To perpetuate the varied character of the woodlands through low impact silviculture.

Maintain as a valuable 'natural' asset within an urban setting for future generations.

To manage desired change gradually, by setting objectives for 5-year periods and to review/ refresh the Plan at the end of each 5yr period to take Cluny Hill in the desired strategic direction.

OBJECTIVES OF MANAGEMENT

Create a management plan with Long Term Vision and shorter-term Objectives that will communicate a required strategic direction, and to allow monitored progress.

Control invasive species (e.g., Laurel, Beech, Sycamore)

Enhance wildlife value (e.g., Retain deadwood where safe to do so, promote a range of desired tree species)

Ensure the reasonable safety of users and neighbours (e.g., Remove unsafe dead and dying trees around high use areas).

Manage the woodlands sustainably and where possible generate a return to reinvest in the woodlands.

Maintain and perpetuate woodland character and value via Low Impact Silviculture Systems (LISS). Develop silvicultural (Shelterwood/ Selection) systems to secure the next generation of desired trees.

THE WOODLANDS - DESCRIPTION

Site Characteristics:

Area: See Appendix 1 for maps and schedules.

Total Area 24.58 Ha consisting of:

10.93ha	6.48ha	5.77ha	1.18ha	o.14ha	o.o8ha
Conifer Broadleaf		Mixed	Cluny	Nelson's	Bare
		Conifer and	Hollow	Monument	
		Broadleaf			

760mm rain /yr average (Rafford weather station 2012-2021)

Elevation 25-77m AOD

Soils: Humus- Iron Podzols derived from Fluvioglacial raised beach sands and gravels of acidic rock origins. Area generally mineral podzols. (Ref: Hutton soils maps). Landform generally: Undulating lowlands with mounds and terraces with gentle slopes

There are designations on the area as per the Land Information Search (LIS) website June 2022:

1.Nelson's Tower Listed Building

2.Conservation Area

3.Historic Environment Scotland Inventory of Gardens and Designed Landscapes 4. Forestry Commission Dedication Scheme

The woodlands are surrounded by Grant Park to the West, Cluny College and Muiryshade Golf Course to the East and houses to the North and South.

There are many good footpaths on Cluny Hill which link into high amenity areas nearby.

There are no watercourses within Cluny Hills. There is however a covered reservoir with associated pipework and infrastructure on the SE Hill (Compartment 1A).

The woodlands are mostly growing on 4 hills, the highest of which is the northern hill at 77m above ordinance datum (AOD) with locally steep slopes on all aspects of the compass.

It is observed that the soils are moderately fertile for forestry purposes with reasonable drainage producing stable rooting conditions.

The steeper slopes above the north and west side of Cluny Hills hold plantations of Beech, Oak, Sycamore, and Mixed conifer. There is generally an understory of

regeneration of Laurel, Beech, Sycamore and Holly. Oak, Birch, Rowan, Spruces, and Firs are also seen to naturally regenerate across the site.

There are mainly Conifer areas which are predominantly to the East and outside of the **Conservation Area**

In the predominantly broadleaved areas to the south and west (Compts 1 and 2) it is **recognized that beech, and more recently sycamore, given time can become the dominant species through natural regeneration in these areas**, possibly spreading into the coniferous areas to the east Compt 1 (SE) and Compt₃). If the mixed species character of the woodlands is to be perpetuated this process will require management to prevent this change in the long term.

Some Pine and Larch are showing signs of stress and infection by fungal pathogens. *Peridermium pinii* is seen occasionally in the Pine and *Phaeolus schweinitzii* seen occasionally in the Larch. The rainfall is possibly borderline for growth of Sitka and Norway Spruce especially on the well-drained soils, however large old Sitka spruce are seen growing well in the area east of the cemetery in the gulley. There are also signs of Oak Dieback. There is a potential risk to Larch from *Phytopthera_ramorum*, therefore it is proposed that the presence of Larch is not increased and kept at current low levels to manage this risk.



(Photo - Larch affected by Phaeolus schweinitzii - potential hazard)

Some of the older specimen trees (Oak, Beech, and Scots Pine) could possibly predate the creation of Nelson's Tower (1812) as planting began in the late 1790's. Note that trees were destroyed by fire in 1815 and again in the mid 1800's.

There have been plantings in a 'Policy Woodlands 'style (see 'Forestry References' page 45) around the Cemetery and Grant Park, and on the approaches to and vicinity of Nelson's Monument. This may have been to enhance the landscape and ambience of the area as many specimen trees are in this area

Much of area has had woodland cover since at least the early 1800's and has had areas felled, replanted, and naturally regenerated. i.e., it is not 'natural' woodland.



(Photo - A Mixture of impressive trees planted around the Cemetery)

Within the body of the woodlands there are a mosaic of age classes: trees have been felled by manually cutting or wind or disease, and have regenerated though natural succession via seed, all of which have produced a range of age classes: from young (o-50 yrs) through to mature age classes of 50-100yrs of conifer and broadleaves in plantations,

and also older specimens of Oak, Beech, Pine and other species at 100 – 200+ years dating from the earliest plantings.



(Photo – Older trees hidden by natural regeneration)



(Photo – Old Oak > 200yrs old?)

Note that the area is well used and fondly regarded by locals. It is used for dog walking, family recreation, mountain biking, school education, orienteering, bird watching, botany, ecology and for peaceful recreation. All of this is within a small-town urban environment, and which is seen as a 'natural' environment and is highly valued.

Silvicultural Discussion

The conditions described above present challenges and opportunities for forest management.

It is proposed that the woodlands be managed under a range of '**continuous cover**' **systems aka Low Impact Silvicultural Systems (LISS)** (see 'Forestry References' page 45) which is possible on well drained soils with stable stands of trees. Advance regeneration of Beech, Sycamore and other species is apparent across the site which can be utilised to advantage. However, it is seen that Beech and Sycamore will tend to dominate areas and suppress other species if left to natural processes over long periods on this site.

The most common system of forest management in the UK is Clearfell and Replant. This system is easier to communicate within a management plan using maps and numbers as it often refers to single species compartments on maps and in schedules, which give species, area, age, stocking, volumes/ha, and other associated data. The results of clearfelling and replanting are generally more predictable as the system does not depend on natural regeneration, which can be fickle.

'Irregular Forestry Systems' (i.e., LISS) can be rather esoteric and difficult to explain with different forms of Selection Systems, Shelterwood Systems and Group Systems and combinations thereof - however essentially under a LISS form of management, the overstory is managed to produce seed, and create combinations of light, moisture, and suitable ground vegetation conditions to promote the next generation of desired tree species establishing from seed. The art is in creating the conditions that facilitate natural regeneration of the next generation of the desired species.

It is envisaged that various forms of the Shelterwood system of forest management will be most applicable at Cluny Hill.

J.D. Matthews states in his classic book 'Silvicultural Systems' that: "Shelterwood systems are those high forest systems in which the young crop is established under the overhead or side shelter of the old one; at the same time the old crop protects the site. The term 'shelterwood systems' includes systems of successive regeneration fellings together with the selection system.

Rather than get bogged in nomenclature and detail at this early stage of the management of Cluny Hill, it is proposed that a set of principles should be followed instead of over-prescriptive instructions. The desired result should be the **perpetuation of the existing varied woodland environment with a 'semi natural' character.** This is a deliberately loose description to encompass the varied management techniques that will need to be employed. A key activity will be managing the overstory and canopy to secure the next generation of trees through natural regeneration and occasional targeted planting if required. Note that management will involve felling of trees to create conditions for regeneration but change should not be dramatic over large areas.

It is also proposed here that **tree cover within the Hilltop Enclosure be gradually reduced** over time to return it to a condition closer to where it was before planting (see graphics below which suggest Nelson's Tower was visible in 1868 but less so in 1898) and to allow further archaeological works, interpretation and for education purposes. It is envisaged that smaller dimension trees will be removed over 10yrs+ so that a few well-spaced specimen trees are left to enhance the area for Nelson's Monument and to allow further archaeological examination and exploration of the Hilltop Enclosure, and to make it easier to use as an educational resource. A 'Park like' environment may have been the original intention when Nelson's monument was constructed and may be appropriate in the future.

View of Forres and Cluny Hill from Balnaferry, c.1868. The recently established Inverness-Perth railway service is in the foreground. (Watson & Watson, 1868). View is to the east.



Watson, J., & Watson, W. 1868. Morayshire Described: Being a Guide to Visitors, Containing Notices of Ecclesiastical and Military Antiquities; Topographical Descriptions of the Principal Country Residences, Towns, and Villages, and Genealogical Notes of the Leading Families in the Country. Elgin: Russell & Watson.



View of Cluny Hill from Forres station in **1898**, (Fraser, 1989, p.33). View is to the southeast

Fraser, Alex. 1989. A Glimpse of Forres of Yesteryear. Elgin: Moravian.

It is proposed to start with the suggested plan of works for the first 5yrs, then review, progress, and revise the Plan with a new 5yr programme of works to continue to progress to desired objectives of management, in line with the Long-Term Vision. See 'Monitoring and Progress' section.

Proposed General Principles of Silvicultural Management for Cluny Hill Woodlands

1. Remove dead, dying, diseased, moribund, unsafe trees identified in **Tree Safety Surveys** and Silvicultural surveys. This is the easiest way to start the system off over the next 5 years after which management and progress should be formally reviewed. For example: target trees showing stress, disease, and structural defects (e.g., crown dieback, fungal brackets, stem splits or cracks). However, see comments on Deadwood below. Tree assessment is best done by a trained assessor.

2. Oak trees were highlighted during consultation as a 'preferred species' to be retained as part of the woodland environment. To that end it was proposed that rescuing Oak trees from suppression by other more dominant neighbours was desirable. A first step should be to identify and remove Beech or Sycamore that are suppressing neighbouring Oak trees, particularly Oaks that look as though they have enough vigour to recover when given space and light.



(Photo - Old Oaks surrounded by Beech regeneration infill)

3. Yew trees were identified as boundary markers of the Hilltop Enclosure within Leif Isaksen's report. These should be located and freed from suppression to ensure survival.



(Photo – An old, supressed Yew on the Enclosure boundary)

4. Maintain the woodland environment; avoid larger clearfells and utilize **Selective felling** of individuals or small **Group Felling** of trees- ideally less than 0.2ha (50m diameter circle), and ideally working with wind firm boundaries. Compartments 2 D2, 1E2 are in the initial stages of this group transformation and should be planted with low growing shrubby species to maintain the views from Nelson's Tower to Findhorn and the Moray Firth as was originally intended when the tower was built. Selection systems tend to favour shade tolerant species but with small group felling more light demanding species of trees can be established.





(Photos above -small groups cut, views from Nelson's Tower and vegetation regrowth apparent)

5. Thin Scots Pine stands to prepare the stands for a **Shelterwood system** of regeneration e.g., Compartment(C) 1a,a1 and C3a,b. Thin on 5-7yr cycles or respond to natural regeneration appearing. Remove the overstory when natural regeneration is established and at appropriate stocking and height. (Possibly 2-3m tall). As an example, this system has arisen naturally in Cmpt 1 A1, but Pine is rarely seen regenerating whereas Sycamore, Birch, Rowan, Sitka, Holly and occasionally Oak are seen to be regenerating there. Bracken may be an impediment to Pine regeneration there. Shelterwood systems tend to favour light demanding species such as Pine, and the overstory/canopy is managed to secure and assist the regeneration of the stand. Some ground disturbance or scarification may be necessary to assist seeding - so long as there is a viable seed source available.



(Photo - Multiple species, ages, and canopy layers in a gap)



(Photo – Multi species, ages, and layers under Pine. Open the canopy, manage the mix)

6. Maintain a mixed conifer/broadleaved woodland and perpetuate areas of existing mixed 'Policy Woodland' (see 'Forestry References' page 45) character by favouring desired species regeneration. Suppress vigorous competitors to the desired species. These areas are generally in the vicinity of the Cemetery and Grant Park and Nelson's Tower (C2). They can be identified in more detail before creating Planning Applications for works in those areas.

7. Remove invasive species e.g., Laurel, Rhododendron, Bamboo (Cluny Hollow) or other undesirables that comes in or that have been planted in the past. Cotoneaster is also present and should ideally be removed.





(Photos above - Prolific Laurel regeneration - useful, or an ecological threat?)

Note that dense stands of trees with an understory can be useful where large numbers of people use the area, as dense stands of trees can act as a screen, so people do not feel so crowded.

8. Reduce the presence of Sycamore and Beech where a more open woodland character is desired (and around viable Oak trees), but possibly utilise them in high public use areas such as on the North Hill (Cmpt 2) outside the Hilltop Enclosure. These species are useful to produce timber and cover, but do not let them dominate the whole site. Beech is a useful species within a Selection system of silviculture.

9. The 4 Hills comprising Cluny Hill have woodland types each with different character of woodland. The character of these woodland could be described in tree and vegetation assemblages (e.g., SP 40%, Larch 15%, Birch 15% Sycamore 15%, Oak 10%, Beech 5%: Wavy Hair Grass ground cover). When these assemblages are identified they could be used as models to assist management to control regeneration and targeted planting. The model used here is for example only and a set of functional models for each hill could be developed over the next 5 years to guide long term management and for the detailed Planning permission applications for each compartment. Allowing woodland cover to adapt and change may be the best long- term approach in face of climate challenges. However, the idea of model assemblages is introduced here as a potential (simple) tool to assist communication between 5yr phases and managers.

10. Assist regeneration of more palatable (to deer) species (e.g., Oak) by protecting with tree shelters when seedlings are found. Compt 1 southern end has one or two good examples of this at present. Scots Pine regeneration is notable by its near absence and will need the canopy opened to assist regeneration. For example, Compt 3. A Shelterwood style thinning will hopefully facilitate regeneration by removing c. 40-50% of stems. This could be seen as a quite a robust removal rate, but it will facilitate opening the canopy and the proposed 'Mountain Bike Skill Area' activities there.

11. Tree removals should ideally be at a rate that does not dramatically increase wind damage probability (difficult with mature stands of conifer) but maintains the woodland environment. Little and often – e.g., 3-5yr cycles of visits and removals would be ideal but may not be practical.

12. Working from the end of summer until March avoids most breeding animals but some animals hibernating could still be at risk (Bats). Also be aware that wet weather brings risks of ground and root damage with soil compaction. This is particularly important in the vicinity of the **Hilltop Enclosure where important archaeological evidence may be waiting to be discovered**. The winter period is better for seeing defects on broadleaved crowns and stems, so safety surveys are better done then. Felling when the sap is down also preferred for most hardwoods used for timber. **13.** When planting trees, it is important to match species characteristics to the planting site, for example, do not plant light demanders in the shade of older trees and avoid planting in the root zones of mature trees as the competition for water, nutrients and light will probably be detrimental to saplings. Practice good Silviculture.

14. Where safe to do so increase the presence of fallen and standing **Deadwood** for biodiversity benefits to provide habitat for rare organisms. Retain standing deadwood in areas only where no hazard is created.

15. Zoning – It can be useful to view the woodland in management zones:

- i) High public use area: around the footpaths for increased survey input for tree hazards (Compartment 2).
- ii) Commercial Areas: That can generate merchantable timber (Compartments 1(east) and 3 which are outside the Conservation Area).
- iii) Hilltop Enclosure/Nelson's Monument: Initially remove understory trees then remove overstory trees over a prolonged 10-20-year period (Compartment 2) but retain specimen trees.

16. There are many silvicultural guides online which can be easily referenced, for example:

https://www.forestresearch.gov.uk/publications/

http://silviculture.org.uk/wp-content/uploads/2013/08/SMcGW_Progress-of-adoption-of-alternative-silviculture-systems-in-Britain_Main-technical-report.pdf

https://cdn.cyfoethnaturiol.cymru/media/681945/gpg6_forest-resilience-1_structural-diversity.pdf?mode=pad&rnd=132094749330000000

See also:

'Practical Forestry for the agent and surveyor' by Cyril Hart (a classic forestry reference)

'Silvicultural Systems' by John D. Matthews

HOW TO ACHIEVE WHAT WE WANT – WORKPLANS AND CASHFLOWS

Note that in the Conservation Area all management activity will require a detailed plan to be submitted to the Moray Planning Department. When approval is given, it will be in the form of a 2-year consent. It is proposed here that one compartment is worked in a 2-to-5-year window such that a detailed management plan (a 'mini plan') is worked up for each compartment, submitted and agreed with the Planners and Scottish Forestry to get felling licenses and then follow through with a work programme to achieve objectives for the compartment. The detailed 'mini plans' will fit within the overarching Management Plan principles for the whole Cluny Hill.

Note also that the east side of Compartment 1 and all of Compartment 3 are outside the Conservation area and will not be subject to this restriction.

It is important to realise that HOW the work is done will be as important as WHY the work was required. Much damage can be done if poor standards of work are allowed without proper consideration for health and safety, environmental risk assessment and protection, and the silvicultural reasons the work is being done for in the first place.

Most of the major works presented in the cashflow below assume that much of the work will be done by contractors. These tasks will require specialist skills (e.g., arboriculture safety works or use of heavy machinery) which will be bought in by employing professionals to complete the works.

However, it would be advisable to tap into the considerable 'volunteer good will' that is seen to exist within Forres. To engage local involvement is likely to be key to the success in the long -term management of Cluny Hill. The 'Forres in Bloom' and 'Sanquhar Dam Renovation Group' activities are both impressive examples of what can be achieved with volunteer involvement. That said there are considerations when using volunteer assistance:

The existing arrangement is that TMC has insurance in place, which does cover the volunteer's activities- so long as effective risk assessments are in place along with the required skills and experience, and so long as volunteers are working to an agreed programme of works agreed with TMC, then the volunteers are covered by that insurance.

It is noted that the Forres in Bloom group have their own insurance and Risk Assessments.

There are specialist insurance companies which can supply this cover (e.g., Zurich Insurers -but others area available).

Note that the Risk Assessment process should also include an **Environmental Risk** Assessment to avoid impacts upon protected species e.g., Birds, Bats, Butterflies, Badgers, Red Squirrels, etc., during breeding seasons.

Risk assessment must ensure that the Hazards are correctly identified, and the risks controlled. For example, working with power tools and machinery, felling trees, using chemicals, and working in the aquatic environment - All require specialist skills which require training and competence to be done safely to protect people, property, and the environment.

Volunteer groups must be aware of statutory restrictions and regulation surrounding certain activities. TMC will agree operational plans and assess risks and statutory compliance. For example:

i) Felling trees generally requires felling permissions.

ii) Wildlife breeding seasons and restrictions on disturbing animals/birds must be considered as part of the risk assessment process.

There does exist a risk to TMC if the volunteers are unsupervised and not adequately controlling risk - for example, if key individuals with qualifications and experience to use power tools and heavier machinery, if those individuals are not available during operations, then the risk assessment must adapt.

A good reference site from The Conservation Volunteers (TCV – previously BTCV): https://www.conservationhandbooks.com/basic-safety-conservation-work/

Summary Action Plan – See Cashflow and Operations map for associated costs and locations

Year/Location	Tree Actions	Comments
2022-23	-Selective felling of diseased /dying/unsafe	-Target hazardous, dead, dying
CMPT2/3	trees.	individuals. But leave standing
	-Halo Thin suppressed Oaks /Yews	Deadwood where safe to do
	-Promote selected natural regeneration and	so. (Cash positive activity?)
	remove invasives.	
	-Build a Timber Transfer Point to Thin Pine C3.	-Tree shelters on Oak
	-Shelterwood Thin Scots Pine C3 for income	regeneration C1
	and prep Biking area.	
	-Tree Safety surveys.	
	-Remove topped trees C1 D2, E2, and replant	Hawthorn, Hazel, Crab Apple,
	with shrubby species.	Bird Cherry?
	-Cluny Hollow clear invasive species	
	-Start removing understory Hilltop Enclosure.	
2023-24	-Remove dead /dying trees.	Remove Laurels suppressing
CMPT2	-Halo Thin suppressed Oaks/Yews.	desired species.
	-Promote natural regeneration.	
	-Control invasive species.	Tree shelters on Oak regen
	-Tree safety surveys.	Leave deadwood where safe
	-Cluny Hollow clear invasive species.	
	-Continue Hilltop Enclosure thinning.	
2024-25	-Remove dead /dying trees.	Control Be, Sy and invasives;
CMPT 1	-Halo Thin suppressed Oaks.	
	-Promote natural regeneration.	Promote desired species
	-Control invasive species.	
	-Tree safety surveys.	Leave deadwood where safe
	-Cluny Hollow clear invasive species.	
	-Continue Hilltop Enclosure thinning.	
2025-26	-Remove dead dying trees.	Control Be, Sy and invasives;
	-Halo Thin suppressed Oaks	
	-Promote natural regeneration.	Promote desired species
	-Control invasive species.	
	-Tree safety surveys.	Leave deadwood where safe
	-Continue Hilltop Enclosure thinning.	
2026-27	-Remove dead dying trees.	Control Be, Sy and invasives;
	-Halo Thin suppressed Oaks.	
	-Promote natural regeneration.	Promote desired species
	-Control invasive species.	
	-Tree safety surveys.	Leave deadwood where safe
	-Hilltop Enclosure thinning.	
2026-27	Review regeneration status of desired tree	Review last 5yr ops and
	species and draw up plans and objectives for	modify Plan
	next 5yr period	

INDICATIVE CASHFLOW (2022 PRICES)

The Cashflow with Operations Map

Note the costs presented below are indicative only and could likely prove to be optimistic. They should be seen as 'markers' for necessary activities

There are many variables that can affect the costs, such as the use of volunteer assistance and how much The Moray Council can do 'in house'. 'Tree safety surveys and works' are assumed to be bought in skills as they require skilled trained people. 'Permissions' assumes someone is employed to apply for permissions and licenses from Planners and Scottish Forestry etc.

'Cluny Hollow' assumes most work is done by volunteers from the Forres Rotary Club and the sum indicates cost of tools/materials bought for the volunteers.

It is assumed that the value of wood will cover costs of thinning beech and removal of topped trees. This could be an overly optimistic assumption but needs to be tested.

Operations Map



Cashflow (See Ops Map for location of activities)

INCOME	2022-23	2023-24	2024-25	2024-25	2025-26	
Timber Sales	C2 SP Thin	Be/Sy Thin	Dead Tree Removal +£2,000	Be/Sy Thin	Be/Sy Thin	
	+£10,000	+£2,000		+£2,000	+£2,000	
EXPEND	2022-23 202	2023-24	2024-25	2024-25	2025-26 2	023-24
Tree safety surveys	£1500	£500	£500	£500	1500	
Tree Safety Works	£3000 (Survey Report+ works)	£500	£500	£1500	£500	
Remove Laurels/ invasives	£10,000 (Enclosure)	£1000	£1000	£500	£500	
Cluny Hollow management	£100	£100	£100	£100	£100	
Thin out Beech around Oak	£500 (marking)	500 (marking)	0	0	0	
Tubes for Oak regen	£300	£300	0	0	0	
Understory Thinning	£500 (marking)	£500 (marking)	0	0	0	
Permissions applications	£1000	£500	£1000	£500	£500	
Remove Topped trees Cmpt2 D2,E2	£500	0				
Plant Cmpt2 D2,E2	0	£2000	0	0	0	
TTP and haulage route maintenance	£2000 (Contingency)	0	£1000	£1000	£1000	

Notes:

1.Remove Laurel – This could be a large expensive job within the Hilltop Enclosure and would need contractors rather than volunteers

2.Thin out Beech around Oak trees (Halo Thinning) needs marked and mapped by a Forester for Planning Application

3.Understory thinning is removal of unwanted tree and plant species

4.Permissions /applications assumes a professional forester applies for Planning Permissions and Felling Permissions from Scottish Forestry

5.Removal of Topped trees assumes value of wood covers costs of removal with an initial cost of a professional forester to plan and agree works

6.Plant Compartment 1 D2,E2 with low growing shrubby trees (Hazel, Hawthorn to control ground vegetation but not obstruct views from Nelson's Tower

MONITORING AND PROGESS – THE SECOND 5-YR PERIOD. (2028-2032)

Any management plan requires that progress is monitored against an agreed programme of works and the information is used to keep the plan on track.

For this Plan to be effective, an organisation will have to take ownership of it and the process, and to take a lead in implementing the works, monitoring progress, and making the adjustments that are inevitably required. The Plan has been paid for by Moray Council and it therefore belongs to TMC. It is assumed that TMC will take the lead in implementing the plan supported by volunteer groups.

The second 5-year period 2028-2032 will need an operation plan review and update to ensure continuity and to maintain the progress made in the first 5-yr period. At present it is envisaged that it will be 'more of the same' for the second 5 years, but circumstances will change and the Plan must adapt, or progress will falter. Availability of cash to pay for operations may be an issue and fund raising may be required by volunteer groups.

SOURCES OF FUNDING / FINANCIAL CONSIDERATIONS

It is not intended to go into detail on fundraising in this document as funding sources change from month to month and the Forres Green Spaces Groups are adept at seeking out sources of funding.

There is also the possibility of investing any timber cash in some form of financial vehicle to generate an annual dividend and provide a long-term revenue stream. This is not discussed in any detail here, but it is mentioned as an option that exists for further investigation.

Other potential sources of funding as example:

- 1. Nature.Scot Environmental advice and list of potential funding organisations
- 2. SRDP (but need to be a registered rural business?)
- 3. Challenge Funds
- 4. Scottish Forestry Grant Schemes
- 5. National Lottery Funds
- 6. Scottish Communities Landfill Fund

FORESTRY REFERENCES

FORESTRY REFERENCES:

The Forestry Standard:

https://www.forestry.gov.uk/pdf/FCFCoo1.pdf/\$FILE/FCFCoo1.pdf

FROM RPID SITE: "Low impact silvicultural systems are a type of woodland management that helps to increase species and structural diversity. It normally causes less rapid change to the landscape and to the physical environment than clear felling systems and so can help the landowner meet multi-purpose objectives". Mosaic of scales of cutting and regenerating.

DEADWOOD: Dead and decaying trees are vital components of a properly functioning forest ecosystem and play a key role in sustaining biodiversity, soil fertility and energy flows such as hydrological processes in streams and rivers. Deadwood also plays a part in mitigating the effects of climate change by acting as a medium-term sink for carbon. Historically, deadwood was systematically removed from woodlands for firewood. By contrast, in wood pastures and wooded commons, firewood was produced from pollards, and this allowed old trees with internal decaying wood habitats to develop. Until the late 20th century, deadwood in managed forests was removed due to a misconception of the need to sanitise woodland to secure forest health – or simply to keep a wood looking 'tidy'. Over time this has led to the widespread impoverishment of woodland biodiversity. <u>https://www.forestry.gov.uk/england-managingdeadwood</u>

POLICY WOODLANDS: Policy type woodland is a good all-purpose small woodland with a variety of potential uses. It can be used to screen structures and public roads, provide a setting for buildings, add autumn colour to a view or manage public access. It can be combined with individual trees, hedgerow trees, avenues, and roundels to create an attractive pattern of landscape features. The key features of a small policy woodland are therefore:

Can be any shape

Large, crowned broadleaves and conifers should dominate

Unusual and exotic species can be accommodated.

See Page 15 of FC Guide: <u>https://scotland.forestry.gov.uk/images/corporate/pdf/small-woodlands-on-farms.pdf</u>

APPENDICES



CLUNY HILL COMPARTMENT SCHEDULE					3		8					
Comp_	Sub	Area	P_Year	Species	Comments	Percentage	Constraints	Constraint2	2			Proposed Works
1	A	2.24	1925	SP	This compt surrounds covered reservoir	100	RESERVOIR	HES Invent	ory and Des	igned	Lan	Good SP 23-24m 600/ha but Peridermium pinii present Remove dead/dying
1	A1	1.22	1925	SP		100	CEMETERY	Conservatio	on Area			LISS-Take Dead/dying and see if desired spp RN comes in.
1	D	0.82	1900	SP/OK/BE/LAR/ WRC	-	/20/20/20/	RESERVOIR	HES Inventory and Designed Land		Lan	LISS -Nice stand-SP/Ok/Be/MC with Thuja next to track with understory Beware Sy regen. Thin out Sy and perpetuate mixed species character	
1	D1	0.08	1900	SP/BE	BE/WRC RN & Laurel	50/50	CEMETERY	Conservatio	on Area			Large SP and Be with Be+WRC+Laurel Rn below
1	D2	0.38	1925	SP/MB		50/50	CEMETERY	Conservatio	on Area			LISS-Thin out Dead/dying Nat Regen will change structure gradually
1	E	0.54	1900	BE/OK		50/50	CEMETERY	Conservatio	on Area			LISS -Control Sy/Be Rn perpetuate character Thin to promote Oak and desired species
1	F	0.68	1900/1925	MC/MB	/	50/50		HES Invent	ory and Des	igned	Lan	Lot of Sy RN reduce Sy (2 big Sy seed source). Thin to promote Oak but note not a good Oak site.
1	F1	0.43	1950	MC/MB		50/50		HES Invent	ory and Des	igned	Lan	LISS -Control Sy/Be Rn perpetuate character Thin to promote Oak and desired species
1	G	1.29	1900/1925	MB/MC		50/50	CEMETERY	Conservatio	on Area		_	LISS -Control Sy/Be Rn perpetuate character Thin to promote Oak and desired species
1	z	0.06	0	UP		100		Conservatio	on Area		+	Track
-		0.74	1025			100		Concerne		+	+	<u></u>
2	~	0.34	1925	3F	BE/Holly/Laurel	100	-	Conservatio	on Area	\vdash	+	LISS - Large specimen Conifer P.nigra With Beech + WRC Rn+Laurel below. Remove understory to emphasise
2	C	0.64	1900	BP/OK/SP	Within Enclosure -	34/33/33		Conservatio	on Area		+	the specimen trees
2	D	0.20	1900	SP/BE	Some ROK/NF	50/50		Conservatio	on Area		_	Natural reserve
2	D1	1.18	1925	SP/OK	SY/BE RN arboretum exotics	50/50	CLUNY HOL	Conservatio	on Area			Survey abd I.D trees and shrubs. Remove bamboo, Cotoneaster and Laurel (unless rare specimens) Needs a sepearte Plan and approach to management (Rotary Club)
2	D2	0.31	1900	SP/OK/BE	Enclosure Contains	34/33/33		Conservatio	on Area			Clear dead monolith SP and Topped Be and RP with low shrubby species
												LISS - Control and reduce Be/Sy Rn. Thin Beech to perpetuate Oak. Remove Dead and dying Leave Deadwood
2	E	4.55	1900	BE/OK	Part within Enclosure	50/50		Conservatio	on Area		+	where safe to do so.
2	E1	0.37	1900	BE/OK	Some ROK/NF	50/50		Conservatio	on Area		-	where safe to do so.
2	E2	0.37	1900	BE/OK	Enclosure Contains North Group	50/50		Conservatio	on Area			Clear dead monolith SP and Topped Be and RP with low shrubby species. THIN JOINING ares with D2 and gradually open up views reduce tree cover
2	F	2.45	1950	MC/MB	Enclosure	50/50		Conservatio	on Area			LISS - Control Sy/Be Rn. Gradually reduce tree cover in Enclosure to reduce uproot risk damage
2	z	0.14	0	MON	Nelsons Monument	100	NELSONS N	Conservatio	on Area		_	
3	A	0.48	1925	SP	SP dying BI/BE RN -	100		HES Invent	ory and Des	igned	Lan	Thin SP as normal woodland operation
3	A1	0.27	1925	SP	Natural Reserve?	100		HES Invent	ory and Des	igned	Lan	Steep slopes- NR leave to wildlife
3	в	4.87	1955	SP/BP	Some big be N end	50/50	MTB Skills a	HES Invent	ory and Des	igned	Lan	Thin SP to facilitate MTB skill site 40% stem removal
3	E	0.65	1925	BE	Sy/MB RN W side -	100	-	HES Invent	ory and Des	igned	Lan	Steep slopes- NR leave to wildlife
3	z	0.02	0	UP		100		HES Invent	ory and Des	igned	Lan	Bare corner leave as is
Re	REECH	(Eamic	subvatica)		NOTE - THE Planting w	aar is given	as 1900 for				+	
BP	Black F	Pine (Pir	nus nigra)		NOTE - THE Flaining ye	ear is given	as 1900 IOI			+		
LAR	Larix s	pp (Laro	ch species)	8		SUMMARY		8				
MB	Mixed	Broadle	eaves			MB/MC	5.77					
MC	Mixed	Conifer	rs (e.g SP,BP	LAR,WRC)		MB	6.48	2			-	2 2 2 2 2
SD	Oak (Q	luercus	spp)	(s)		Bare	10.93			\vdash	+	
WRC	Weste	rn Red	Cedar (Thui	a plicata)		Helges	1.19			\vdash	+	
			tridj	- meaning		Nelsons	0.14			\vdash	+	
MON	Monur	ment - I	Nelsons Tow	ver				2				
						TOTAL	24.58					

The Hilltop Enclosure on Cluny Hill, Forres

description, destruction, disappearance

LEIF ISAKSEN Department of History, Lancaster University March 15, 2017

Introduction

Local tradition has long held that a hill-fort¹ existed upon the summit of Cluny Hill in Forres, Moray. It has variously been attributed to Neolithic and Middle Iron Age² tribes, Pictish warlords, Scottish kings, and Viking raiders. A record for it exists in the Moray Sites and Monuments Record (Moray SMR)³ and National Monuments Record of Scotland (NMRS).⁴ Both ultimately derive from accounts summarised by the Ordnance Survey. It also finds occasional mention in a wide range of local history books and the hill continues to exert an influence on the public imagination (Taylor, 2015; Yeadon, 2015). Yet the existence of an earthwork, let alone its nature, has remained a matter of debate. Cluny Hill was planted and heavily landscaped in the early 19th century, making visual confirmation extremely difficult. The SMR record, though expressing a high confidence in its existence and proposing an early medieval date for it, cites just two 19th century antiquarian works as evidence (Chalmers, 1807; Hibbert, 1857b) and holds almost no other documentary records about the site. Most of the literature in the more comprehensive NMRS record is little more than series of Chinese whispers, and the earliest source cited in common - the antiquarian George Chalmers' Caledonia - is often unreliable in both its general and specific conclusions. Two mid-20th century visits by Ordnance Survey archaeologists disputed the designation and it was consequently removed from OS maps in 1984.

The aim of this report is to offer a firmer evidence base by which to determine its existence and nature. It commences with a discussion of published literature, followed by a more extensive investigation into early newspaper reports, maps and plans of the hills, and documents from the Chalmers Archive. An additional contribution of the research is to determine the sequence and impact of modifications to the hills in the 19th century. As many of the documents referred to are difficult to access, an extensive appendix of key document excerpts is also provided. All references, citations and URLs within the main text are hyperlinked for easier reading. Results are compared with the current state of the hill's surface, as determined both through visual inspection, a geophysical survey, and LIDAR surface scanning kindly provided by the Scottish Orienteering Association.⁵ GIS and 3D modelling technology are used to provide a more comprehensive view of the morphology of the hills than previously possible.

The report concludes that the presence of a large hilltop enclosure is all but certain and that it corresponds in some regards to the physical description published by Chalmers. This is followed by brief reflections on interpretation, but further archaeological fieldwork

is recommended in order to establish more reliable information as to its origin, development, abandonment, and post-use history.

¹The formal classification of 'hill-fort' covers an extremely broad range of archaeological monuments in terms of their situation within a landscape, their level of fortification, and their presumed function. Given the inherently loaded nature of the term 'fort', sites for which defence of the occupants is not necessarily the primary goal are often referred to as enclosures (Ralston, 2006, p.6-7). While the site of Cluny is indisputably a hill, the above- ground remains are currently insufficient to conclusively determine either form or function, and so the term 'hilltop enclosure' will generally be used here.

²Use of the term 'Iron Age' is problematic in Scotland, due the lack of an agreed cultural horizon to contrast it with. This can lead to confusion when comparing historical references which may or may not include within its scope the era of Roman occupation in southern Britain and/or the pre-Scottish kingdoms. A current convention is to talk of the 'Long Iron Age' which encompasses all of these and is divided into Early, Middle and Late periods. The bounds of these subdivisions are inevitably open to debate in a region of such heterogeneous influences (Hunter & Carruthers 2012). I will here follow Armit (2016, p.7) for a period between c. 700 BC and c. 400 AD before returning to the topic in more detail in Section 8.

³Reference

NJ05NW0004;

https://online.aberdeenshire.gov.uk/smrpub/master/detail.aspx?tab=main&refno=NJo5NWooo4

⁴Reference 15818; https://canmore.org.uk/site/15818

DISCOVERY AND EXCAVATION IN SCOTLAND – THE CLUNY HILL DIG

Cluny Hill dig

Excavation and geophysical survey Michael Sharpe

NJ 04461 59032 A community archaeological excavation was undertaken on Cluny Hill, Forres, over two weeks between 19 June-1 July 2017 and 8-22 September 2018 by local volunteers and students, under the supervision of the Cluny Hill Dig team. The excavation compliments a previous desk-based assessment which synthesised and evaluated the documentary and cartographic evidence for the presence of a hillfort on Cluny Hill. Historical and archaeological testimony for the presence of a fort overwhelmingly refers back to the Antiquarian George Chalmers' *Caledonia* (1807), but a small number of earlier or independent references were identified. Extensive tree planting and intrusive landscaping in the 1840s removed or obscured any remaining evidence of the ditch and bank described in the written sources. References to the hillfort in OS maps were consequently removed in 1984, due to a lack of evidence of the monument on the ground.

A LIDAR scan of Cluny Hill commissioned by the Scottish Orienteering Association in 2015 revealed two surviving portions of the ditch, visible as shallow curvilinear depressions, interrupted by landscaping and paths. The entire circuit of the ditch, estimated to be 760m, encloses an area of approximately 3.6ha. on the northernmost summit of Cluny Hill. Intermittently, the line of the ditch was shown to coincide with the modern circular footpath. In August 2016, results from a magnetometry survey interpreted in combination with the LIDAR data and a walkover survey offered additional evidence for the presence of a significant ditch and possible bank in certain areas. In addition, significant geophysical anomalies were recorded near the summit of the hill. These results, and those from subsequent geophysical surveys undertaken with volunteers as part of the community project, provided targeted areas for excavation over two seasons in 2017 and 2018.

In 2017. Trenches A-C were opened on the S side of the hill across the apparent line of the ditch, while Trench D was opened across the remaining length of the ditch on the N side of the hill. Trench E was opened on the N-facing summit of the hill, in the enclosed area, to investigate a geophysical anomaly.

Evidence of the ditch in Trenches A-D was as follows:

A: The ditch cut was 3.7m wide x 1.1m deep. A subterranean beehive on the downhill side prevented further excavation, and thus that end of the ditch cut, and any bank, could not be revealed. B: The ditch cut was 3.8m wide x 1.3m deep. No sign of a bank. This trench also incorporated a 1m-square pit dug at some point in the late 20th century, as dated by buried plastic food wrappers.

C: The ditch cut was 2.9 m wide x 1.2m deep with a 0.5m-high bank on the downhill side. A grey, stony deposit at the top of the bank contained charred oak from timber of approximately 0.15m diameter, and which returned a radiocarbon date of 821-769 ea! BC (Beta 473313; IntCal20).

D: The ditch cut was 1.lm wide by 0.9m deep. The steepness of the slope to the S prevented full excavation of the ditch cut. Evidence of the bank was unclear, though a well-preserved stake/ posthole with a halo of charcoal around what must have been a sharpened tip was found on the downslope side of the ditch.

The ditch fills were largely composed of deep deposits of sterile sand, probably related to backfilling during the 19th-Century landscaping activities described in documentary sources. The source of the sand is likely to be a quarry on the eastern hill which is also depicted on the 1st Edition OS map. The lack of any organic material in the interface suggests that turf was removed before backfilling and then re-laid above it. Unfortunately, this disturbance affects the security of the context in which the LBA- oak from Trench C was found. A possible fragment of saddle quern was recovered from Trench A.

Trench E was placed to explore a geophysical anomaly and a

low, curvilinear earth bank. Initially opened as a test trench, Trench E was extended southward in order to investigate suspected stone paving encountered during coring. Within the

8.7xl.lm trench, tap slag, heat affected earth, and charcoal were encountered along with an area of paving. Tentatively interpreted as a metal-working area, this trench was positioned in an area of dense foliage and was backfilled for investigations to continue the following year under better conditions. The sub-surface remains of a curvilinear bank, probably the remains of a turf-walled animal enclosure, overlay an old ground surface and were unrelated to the underlying stratigraphy. Roundwood charcoal recovered from the metalworking deposits returned a radiocarbon date of 351-52 cal BC (Beta 473311; IntCal20).

A metal-detecting survey undertaken as part of the community project recovered: 13 spherical lead shot (9.4-11.lmm); a number of post-medieval buttons and coins; iron slag, likely scattered from the metalworking area in Trench E; and numerous fragments of iron, which may be related to other modern metal discovered in the topsoil. All of the above were from unstratified contexts.

In 2018, the aims of the second season were: to expand Trench E in order to further characterise the nature of the activity around the stone paving, charcoal, and tap slag; to look for additional evidence of the ditch and possible bank, and to further characterise its nature-whether a defended or simple enclosure; and to explore additional geophysical anomalies that had turned up during the survey.

Cluny Hill Dig: smithing hearth, Trench 1

Trench 1: This was an expansion of Trench E from the 2017 season. This enlarged trench revealed a paved iron-smithing hearth (surrounded by a halo of hammer scale), other areas of paving, and numerous pits and postholes, with some of the latter suggestive of a structure. Vitrified clay and several crucible fragments were found in proximity to the metalworking area. In addition, charcoal recovered from two adjacent pits returned Early

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DISCOVERY AND EXCAVATION IN SCOTLAN



MORAY



Cluny Hill Dig: East-facing section of Trench D showing the ditch, bank, and postho/e

Iron Age dates 748-402 cal BC (Beta 528474; IntCal20) and 512- Environmental samples (2017 and 2018) 233 cal BC (Beta 528473; IntCal20).

Trench 2: This 1 x 3.7m trench was opened up about 20m E of the 2017 season's Trench C, in an attempt to find further evidence of the ditch and apparent bank revealed in Trench C. The cut of the ditch was evident, but there was no sign of a bank, nor of the stone and charcoal that had been found in Trench C.

Trench 3: This 2.4 x 3m trench was opened up adjacent to Trench D from the 2017 season in order to look for more evidence of a bank, and possibly a palisade, downhill from the ditch. No further evidence of post- or stake-holes, or the bank, was found, but rather what appeared to be disturbance dating to the 19^{th} -century landscaping and backfilling of the trench.

Trench 4: This 2 x 6m trench was opened to explore a geophysical anomaly on the northern slope of the hill within the enclosed area. Excavation revealed what appeared to be a stony track or area of metalling, and a bank to one side, running obliquely downhill in a westerly direction from the area in which the metalworking deposits were found. The surface of the track predominantly comprised cracked and heat-affected cobbles. Charcoal from among stones at the base of the track returned a radiocarbon date of 390-202 cal BC (Beta 528471; IntCal20). Charcoal from the base of the bank dated to 751-408 cal BC (Beta 528472; IntCa120). The location, orientation, and radiocarbon dates all appear to suggest that the track is contemporaneous with the metalworking area. It has not yet been possible to determine whether or where the track intersects with the enclosing ditch. Finds in the vicinity of Trench 4 included several pieces of partially vitrified clay (possible furnace lining), a small drip-like piece of copper-alloy, and iron slag.

Trench 5: This 1 x 3m trench was opened on a terrace, downslope of Trench 1, to explore a geophysical anomaly, but contained no archaeology.

Trench 6: This 2 x 2 m trench was opened to explore a geophysical anomaly on the northern slope of the hill within the enclosed area. This trench contained no archaeology but did contain corroded fragments of modem sheet metal in the topsoil, which likely explains some of the magnetometry anomalies.

Trench 7: This 2 x 2m trench was opened to explore a geophysical anomaly approximately 10m to the W of trench 1. It contained one small posthole.

The radiocarbon dates (2017 and 2018)

The radiocarbon dates suggest at least two phases of activity on Cluny Hill: one between 750 and 400 BC and another between 390 and 200 BC, but possibly as late as the 1st century BC. The early Iron Age dates for the metalworking area in Trench 1/E and in the trackway (Tr 4), suggest a First Millennium date for its construction. However, since the context of charcoal in the stony bank of Trench C is insecure and not replicated in any other trench, any association with the Late Bronze Age is tentative at best. Note that all dates are given with a 95.4% probability.

Samples from the bank in Trench E were mostly roots, leaves, and beech masts, and were discarded. In Trenches E and C, charred material was common, and was largely small fragments of charred wood. In a few cases, this could be identified as oak from timbers with an estimated diameter upwards of 0.15-0.20m. One of these supplied the date for the bank in Trench C. Small diameter charred roundwood was common from samples in the metalworking area of Trench E. No identifiable seeds were recovered, apart from beech masts in Trench E, and a few charred hazel shell fragments from Trench D. The flats from the bulk samples in Trenches 1 and 4 produced numerous charred cereal grains (identified under the supervision of Dr Scott Timpany, Orkney College, UHI). These were recovered from the trackway in Trench 4, and also from pit fills in Trench E, and included Emmer wheat, hulled barley, both two-and six-row hulled barley, and naked barley. Although none of these have yet been radiocarbon dated, to do so might result in tighter dating of the features, and also help flesh out a timeline for the introduction of various crop varieties in the region. Otherwise, the samples from these two trenches contained much very finely divided charred plant matter-mostly wood-including occasional fragments of roundwood charcoal, and larger chunks of hard and softwood up to 20mm in size. Charred hazel shells were found in small quantities in Trench 4, and in pits in Trench E.

The two seasons of excavations on Cluny Hill successfully confirmed the presence of the extensive enclosing ditch reported in documentary sources, even if its status as a defensive site remains unclear. The size of the enclosure places it among the largest in the region (and as the largest within the environs of the Moray Firth). It is comparable in scale, and to a lesser extent morphology, with enclosures at Little Conval, Durn Hill, Cnoc an Duin, Hill of Newleslie, Dunideer, Knockargetty Hill and Bruce's Camp. With evidence of ferrous and non-ferrous metalworking, Cluny Hill also joins the growing corpus of Iron Age sites in Moray with such evidence; but is set apart by its hilltop location in comparison with the typical unenclosed lowland sites, and its potential for an earlier position on the regional timeline. Radiocarbon dates from the metal-working area and trackway suggest at least two distinct phases of occupation: an early phase between 750-400 BC and a later phase from 390-200 BC, possibly extending into the 1st century BC. The presence of charred grains and possible quern fragment strongly supports the likelihood of domestic occupation on the hill. The lack of any deposits that might be attributed to Pictish or medieval activity provides additional support for an Early Iron Age (or possible LBA) interpretation for the ditch. Future post-excavation work will aim to further reline the site chronology with radiocarbon dating of organic remains; conduct a full metallurgical analysis; and carry out additional geophysical survey in recently cleared areas of Cluny Hill.



Funder: (2017) Aberdeenshire Council Archaeology Service, Lancaster University, Heritage Lottery Fund, through the Moray Society/Elgin Museum. (2018), Berry Burn Community Fund via our partners The Friends of the Falconer Museum, Forres

From:	Caroline <caroline.palmer@aberdeenshire.gov.uk></caroline.palmer@aberdeenshire.gov.uk>	Palmer
Sent:	15 September 2021 13:07	
То:	David Hardie	
Subject:	RE: Cluny Hill, Forres	
Attachments:	Cluny Hill Dig DES entry.pdf	
Follow Up Flag:	Follow up	
Flag Status:	Flagged	
Dear David,		

Thanks for the revised concept map and further to my phone call yesterday.

There are relatively few sites recorded on the HER within the Long-Term Forest Plan area, but these include the regionally significant hillfort enclosure (HER NJ05NW0004).

As advised, Dr Isaksen has not yet completed the report on the 2017 and 2018 Cluny Dig excavations, although a summary report has been published in Discovery and Excavation in Scotland (DES - copy of the entry attached for information). Key findings of the documentary, Lidar, geophysical survey, and excavations are:

- Although the hill was significantly landscaped in the 19th century (particularly with the creation the paths networks) and almost nothing remains visible above ground, the recent the investigations have confirmed the presence of a hillfort and survival of below ground archaeological remains. These include both the enclosing ditch and bank (albeit destroyed in places by the paths) and remains of activities/settlement within the enclosure.
- Radiocarbon dating indicates that the hillfort dates from the earlier Iron Age, and there were at least two phases of Iron Age activity within the enclosure (dating of a sample suggesting an origin in the Late Bronze Age is now thought to be insecure and would have to be confirmed by additional sampling).

I note from the report in DES that further post-excavation work will aim to refine the site chronology, and additional geophysical survey is suggested. However, the results of the work to date demonstrate the survival of buried archaeological remains which would be vulnerable to root damage, and which need to be protected in line with UKFS. Given the nature and significance of the site, ideally the enclosure would be maintained as open ground with a small unplanted buffer, however, it is acknowledged that the landscaping on the hill is also of historic interest, including the yews planted in the 19th century to indicate the extent of the fort. Accordingly, we concur with the proposals for minimal ground disturbance of the enclosure (including leaving stumps where existing trees are removed): this management should extend to include a small buffer zone around the line of the enclosing bank and ditch.

With regard to the cycle park, creation of a designated area which will help stop unofficial activity within the hillfort enclosure would be welcome. From an archaeological perspective, the preference would be for building up of e.g., jumps rather than ground works, though the source of material for build-up would also be a consideration. On the edge of the possible cycle park area in Cpt 3 the HER records a skeleton found in 1825 (NJo5NWoo94) when digging a new road and which was locally said be that of a soldier shot for desertion, however, this identification cannot be confirmed, and the exact location remains uncertain, so the possibility of any further burials in the area is unclear. Otherwise, no archaeological remains are currently recorded within the proposed area.

If a planning application is required for creation of the cycle park it would be assessed by the Archaeology Service as part of the planning process and, depending on details of the proposed works, it is possible that some archaeological mitigation condition would be requested. If a planning application is not required, due care should be taken with regards the historic environment nonetheless and any works should minimise potential impact. We would be happy to advise on appropriate mitigation. Anyone carrying out activities in the area needs to be aware of the legal requirements in Scotland:

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- There is a legal requirement in Scotland under the laws of bona vacantia, to report any objects/artefacts found to the Treasure Trove Unit (<u>http://www.treasuretrovescotland.co.uk/</u>). We would also ask that the Service is also notified as regional archaeologists for the Aberdeenshire area.
- There is a legal requirement in Scotland to notify the Police if human remains are uncovered. In this event, please also contact ourselves at the Archaeology Service.

These also apply to the rest of the LTFP area, although no other associated features/artefacts are currently recorded outside the hilltop enclosure.

Should you have any queries, please get back to me.

Regards,

Caroline

Caroline Palmer Archaeological Assistant/HER Officer (P/T)

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Email: <u>caroline.palmer@aberdeenshire.gov.uk</u> Please note office working hours: Mon-Fri 9:15am – 3:30pm

Archaeology Service for Aberdeenshire, Moray, Angus & Aberdeen City Councils https://www.aberdeenshire.gov.uk/leisure-sport-and-culture/archaeology/ https://online.aberdeenshire.gov.uk/smrpub/

Your feedback is important to us and helps us to improve our service – we value your <u>comments</u>.

Appendix 3 - Cluny Hills Mountain Bike Facility, Forres Agreement Between Moray Council and Forres Community Sports Hub

The Cluny Hills proposed site for a new mountain biking facility is owned by Moray Council. The boundary extent of the operational area is shown on the accompanying plan. As owners of the site, the Council will ultimately be responsible for any built features and activities carried out on their ground. This agreement has the objective of minimising risks in relation to this liability.

The Council will not be operating the mountain biking facility. This will be operated and managed by the Forres Community Sports Hub (FCSH) Mountain Biking Subgroup.

For information - Please see a copy of the agreement between TMC and the FCSH below:

This agreement is needed to clarify specific requirements that will allow the Council to permit the construction and continued operation of the mountain biking facility on their ground and to ensure that the facility is covered by the Council's public liability insurance policy.

The specific requirements are as follows:

- 1. All jumps and other related built features shall be constructed to an agreed Mountain Biking courses industry standard and in accordance with the details and conditions of any planning consent. In addition, all details shall be approved by the Moray Council Open Space Officer prior to any construction on site.
- 2. The facility will be operated and managed in accordance with the risk assessment contained as **APPENDIX 1** of this agreement. This risk assessment will require to be reviewed annually by the FCSH Mountain Biking Subgroup. An agreed reporting process must be in place to cover more serious incidents requiring emergency medical support on site.
- 3. FCSH Mountain Biking Group should ensure they at all times have a valid public liability insurance policy to cover operation of the facility which would provide a minimum limit of indemnity of £10M for any one event. A copy of the policy should be submitted to Moray Council Open Space Officer. Signage should be erected for the public who wish to access the site to caution them in relation to the risks associated with mountain biking activity. Signage should also include contact details for the public to report issues/defects.
- 4. FCSH Mountain Biking Subgroup will carry out quarterly routine inspections of all constructed features and provide written reports to the detailing features condition and required repair works to keep the facility functional and safe. Inspections will also be required after extreme weather events. Repair works should be prioritised on the basis of safety considerations. An ongoing log will be required to be kept detailing when such repair works have actually been carried out.

- 5. FCSH Mountain Biking Subgroup will provide an annual maintenance schedule for the facility detailing required ongoing routine maintenance works and the associated time frames for these to be carried out. An ongoing log will be required detailing when maintenance works have been implemented
- Copies of all required schedules, reports and logs shall be passed by FCSH Mountain Biking Subgroup to the Moray Council Open Space Officer. (Submitted annually for the risk assessment review and maintenance schedule; quarterly for inspection reports and repair and maintenance logs)
- 7. Either party to this agreement can withdraw at any time subject to issue of a 6-month notice of termination. Any notice must be made in writing. On termination of this agreement FCSH Mountain Biking Subgroup shall be required to remove all constructed features and reinstate the ground within 3 months of termination, all to the reasonable satisfaction of the Council.

Signed

ON BEHALF OF MORAY COUNCIL

Signed

ON BEHALF OF FORRES COMMUNITY SPORTS HUB