A report to Forest Enterprise Scotland (FES)

Lichens at Cnoc an t-Sabhail, Morangie Forest

Andy Acton

November 2013

Good populations of the upland lichen Cladonia rangiferina were recorded at Cnoc an-Sabhail. The thallus can be tinged purplish and/or brownish (examples of both are seen in this photograph).

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1 INTRODUCTION

1.1 Background

Forest Enterprise Scotland (FES) plans to establish native trees on an area of upland moor at Cnoc an Sabhail (NH7281) in Morangie Forest near Tain. An open ground habitat survey by the FES Open Habitats Ecologist found that much of the area was bog habitat on deep peat and was unsuitable for tree planting (Waddell, 2013). The report highlighted some areas that might be suitable for planting but noted that these supported a well-developed lichen flora and recommended that a lichenologist should be consulted. Graeme Findlay, Environment Manager for FES North Highland Forest District commissioned a lichen survey to assess the importance of the lichen flora and provide management recommendations.

1.2 Study site

The study site is shown in the map and aerial photograph in Figures 1 and 2. The area is dominated by upland heath and blanket bog with a well-developed terricolous lichen flora.

Figure 1. A map of Cnoc an t-Sabhail. © Crown copyright, all rights reserved. 2012. Licence number 100021242.

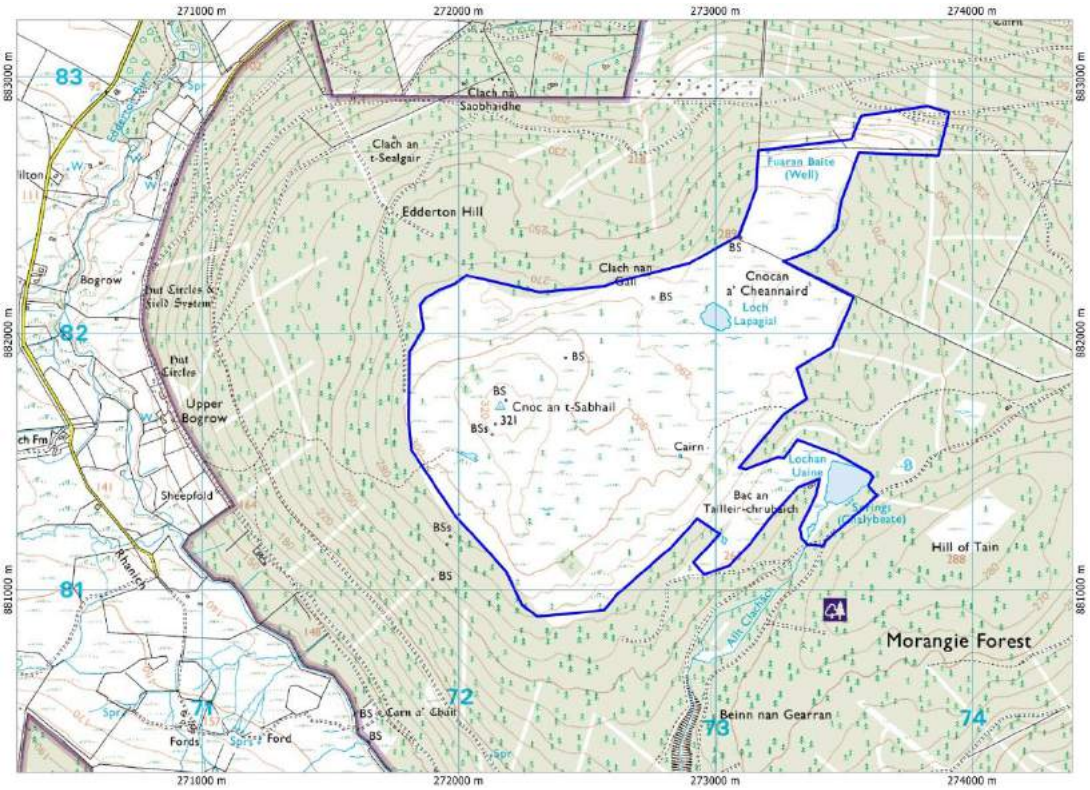
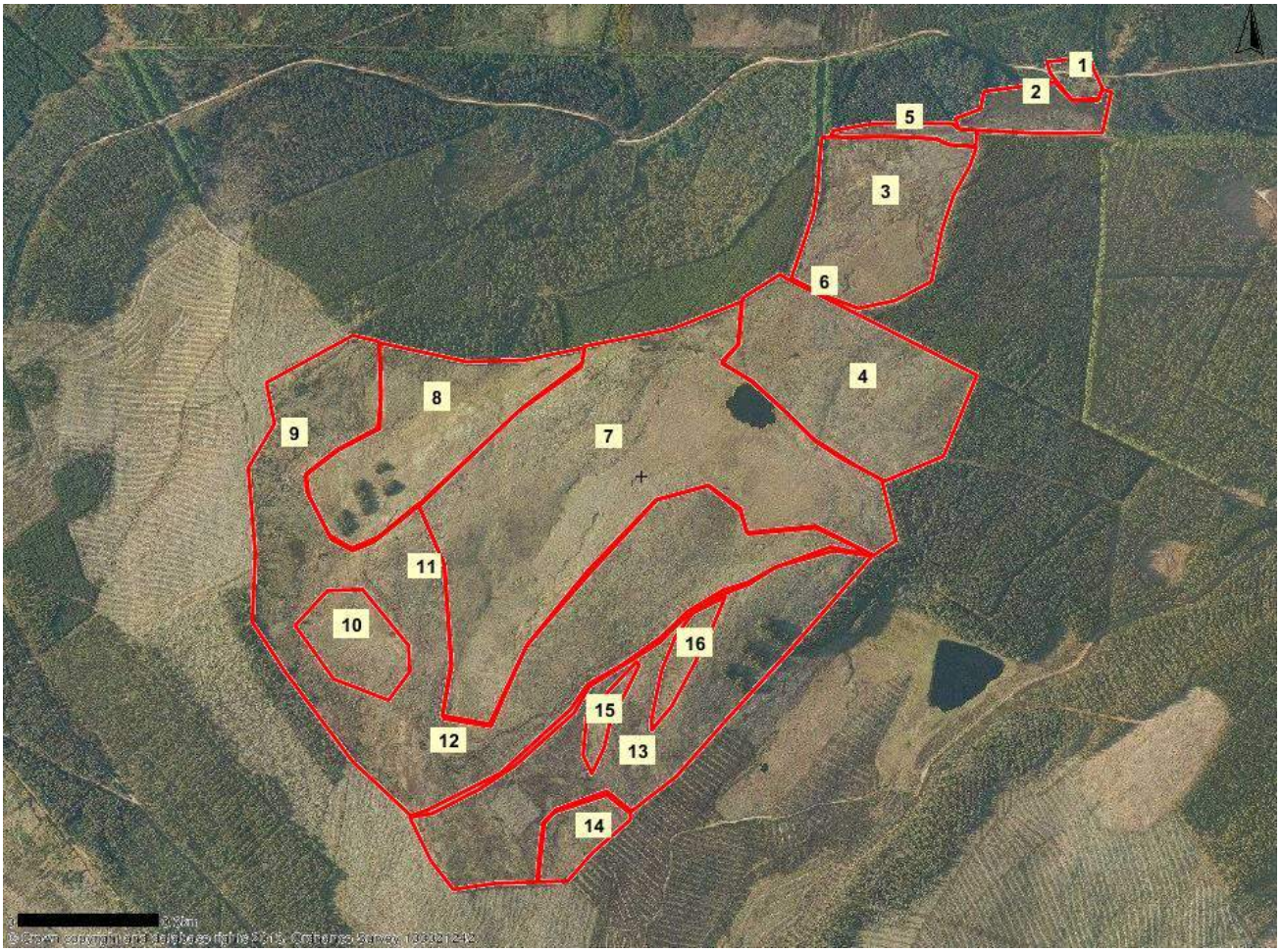


Figure 2. An aerial photograph showing polygons surveyed by Waddell (2013). Note the numbers 9 and 11 refers to target notes not polygons. © Crown copyright, all rights reserved. 2012. Licence number 100021242.



2 METHODOLOGY

2.1 Field survey

The survey took the form of a rapid walkover survey of the study site. Potential lichen habitats within the study site were briefly examined for conspicuous lichens, with a closer inspection where the lichen flora appeared likely to support species of interest. Survey effort concentrated on those areas highlighted as suitable for planting by Waddell (2013) i.e. polygons 2, 5, 4, 13. Additional polygons explored included polygon 1, 3, 7 and parts of polygons 7 and 12. Polygons 8 and 10 were not visited. Polygons 8 and 10 are areas of blanket bog on deep peat (Waddell, 2013).

The locations of any conspicuous Nationally Rare, Nationally Scarce or Threatened (e.g. Red List) species that are readily identifiable in the field were recorded with a Garmin eTrex H Global Positioning System (GPS).

Samples were collected of species that were not readily identifiable to species level in the field for subsequent identification in the laboratory.

2.2 Constraints

Many lichens are very small and inconspicuous so easily overlooked without thorough searching which can be very time consuming. Some inconspicuous species are likely to have been overlooked during this rapid survey, and this could possibly include notable lichens.

Despite the above constraints the survey was sufficient to enable an assessment of the lichen flora.

3 LICHEN HABITATS AND SPECIES

The main lichen habitats examined were wet heath, blanket bog, pine trees (scattered lodgepole and Scots pines) and deadwood habitats. Additional habitats which were much scarcer in the study site included rowan saplings, a mature willow, and siliceous rock habitats.

The above habitats supported a range of terricolous, saxicolous and epiphytic lichens. In total 76 taxa were recorded. Table 5 in Appendix 3 lists the taxa recorded and their substrate. Notable species and some of the more interesting species recorded are listed in section 3.1 and 3.2.

The lists of lichen taxa recorded during the survey have been submitted to the Scottish Sites Lichen Database (SSLD) and will subsequently be uploaded to the National Biodiversity Network and be available at http://data.nbn.org.uk/.

3.1 Notable taxa

Notable lichens and lichenicolous fungi recorded during the survey are summarised in Table 2. None of them are of particular conservation concern and are Nationally Scarce because they are nationally under-recorded.

*Table 2. Notable taxa recorded in the study site. Conservation Status follows Woods & Coppins (2012) where **LC** = Least Concern (i.e. not threatened in GB though it may still be of conservation value e.g. regionally threatened); **NS** = Nationally Scarce, For explanations of terms and other abbreviations refer to Appendices 1 and 2.*

Taxon name	Conservation Status	Note
Abrothallus prodiens	LC NS	An inconspicuous lichenicolous fungus on the very common lichen *Hypogymnia physodes*.
Porpidia contraponenda	LC NS	A common species on upland siliceous rock.
Porpidia melinodes	LC NS	A common species on upland siliceous rock.
Usnea wasmuthii	LC NS	A widespread epiphytic species that is often overlooked and so under-recorded.

3.2 Other lichens of interest

The only old woodland indicator species recorded was *Imshaugia aleurites* (recorded on one pine in polygon 14). This is an 'old pinewood indicator' species (Coppins & Coppins, 2002). Better populations of this species were recorded in the Scots pinewood in the Scotsburn Reserve (Acton & Coppins, 2013).

One of the more interesting terricolous species recorded was the upland species *Cladonia rangiferina*. The species is described as 'widespread but rather local' in Smith *et al.* (2013). Its main habitat is on exposed moss-lichen heaths and moorlands, but it can also be found in pinewoods. Good populations of *C. rangiferina* were recorded in the study site. The best populations were recorded in area 13 and 14 but it was also recorded from polygon 2, 3 and 4.

3.3 Overall evaluation of the lichen assemblage

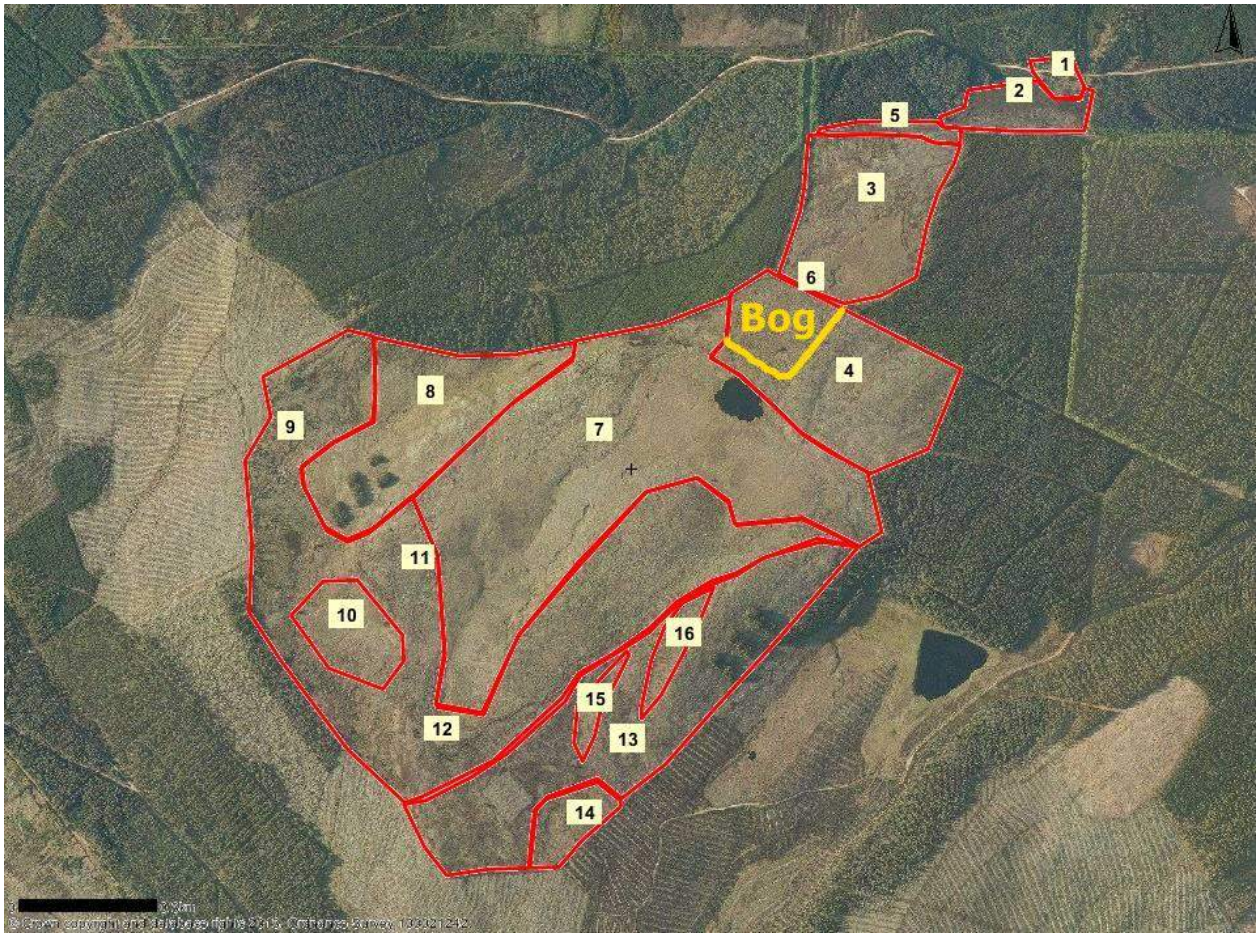
Although the upland bog and heath has a well-developed lichen flora, it is generally dominated by a few common and widespread moorland species (especially on the bog where *Cladonia portentosa* is overwhelmingly dominant). The low levels of grazing and trampling account for the lushness of the *Cladonia* flora. The terricolous flora is more species rich where the ground vegetation is less rank e.g. along tracks (e.g. those to the peat cuttings that pass through polygon 13), on the thinner soils of wet heaths (e.g. parts of polygon 4) or where there has been some disturbance (e.g. ploughed ground outwith the study site to the southeast of polygon 14). However, although these areas supported a more diverse lichen flora, the species recorded were mostly common and widespread species. None of the areas examined during the survey are of particular conservation importance for lichens. The main terricolous species of interest recorded was the upland lichen *Cladonia rangiferina* and the populations here have some value as Cnoc an-t-Sabhail is the main area of upland habitat in Morangie Forest.

5 MANAGEMENT CONSIDERATIONS

No lichens of high conservation interest were recorded, and some woodland expansion into areas 2, 4, 5 and 13 is unlikely to have any major impact on the lichen flora. However, best practice would aim to minimise any potential negative long term negative impact on the lichen flora. Recommendations include:

- In all woodland expansion areas, any patches of bog should be avoided (they should not be planted, mounded or crossed by heavy machinery).
- Leave area 14 unplanted and avoid crossing it with heavy machinery (it supports a good population of *C. rangiferina*).
- Any planting in area 4 and 13 should be patchy and specifically avoid planting some of the thinner soils (the good populations of *C. rangiferina* here might then persist).
- Avoid the western section of polygon 4. This area was dominated by bog with bog pools (see Figure 3).
- Browsing levels on the bog are very low (very few tracks were seen and these were lightly used). Although not a priority, a higher level of browsing/trampling on the bog could lead to a more diverse sward structure that would be likely to support a more diverse lichen (and possibly bryophyte) flora.

Figure 3. An area of bog with bog pools within polygon 4. This area (highlighted in yellow) should be avoided.



6 REFERENCES

Acton, A. & Coppins, B.J. 2013. Scotsburn Pinewood lichen survey. An unpublished report to Forest Enterprise Scotland.

Coppins, A. M. & Coppins, B. J. 2002. *Indices of Ecological Continuity for Woodland Epiphytic Lichen Habitats in the British Isles*. British Lichen Society, London.

Smith, C. W., Aptroot, A., Coppins, B. J., Fletcher, A., Gilbert, O. L., James, P. W., and Wolseley, P.A. (Eds), 2009. *The Lichens of Great Britain and Ireland*. British Lichen Society.

Woods, R.G. & Coppins, B. J. 2012. *A Conservation Evaluation of British Lichens and Lichenicolous Fungi. Species Status 13.* Joint Nature Conservation Committee, Peterborough.

APPENDIX 1 GLOSSARY OF ECOLOGICAL TERMS

Assemblage	The lichen assemblage at a location refers to the lichen communities and lichen species present.
Biodiversity	The total range of variability among systems and organisms at the following levels of organisation: bioregional, landscape, ecosystem, habitat, communities, species, populations, individuals, genes and the structural and functional relationships within and between these different levels.
Bryicolous	Growing on bryophytes (mosses or liverworts).
Community	A group of species characteristically found in the same location due to the similarity of their habitat or micro-habitat requirements.
Corticolous	Growing on bark.
Ecological continuity	Habitats with a high degree of ecological continuity are those which have existed in a more natural state for longer. For example, ancient woodland.
Epiphytic	Growing on other plants (generally on trees in this report) for mechanical support (and not parasitic).
Index of ecological continuity	A measurement of ecological continuity based on the presence of certain indicator species that are generally poor colonisers of new habitats and seem to require ecological continuity.
International Responsibility status	In this report, this category only applies to lichen species. British populations of lichens with International Responsibility are considered to be of international significance. Woods & Coppins (2012) estimate that Britain supports more than 10% of the European and/or world's population of these species. Many of these species are member of the *Lobarion pulmonariae* lichen community.
Least Concern	An IUCN Red List category for a taxon that has been evaluated against the IUCN criteria but does not qualify for Critically Endangered, Endangered, or Vulnerable. The category also excludes Near Threatened species (see below). This category includes species that are widespread and abundant but can also include species that are of conservation value. For example a species listed as LC may be of regional, local or very local (site-based)

	conservation value.
Lichenicolous	Growing on lichens.
Lignicolous	Growing on deadwood (lignum).
Nationally Rare	Occurring in 15 or fewer hectads (10 x 10 km squares) in Great Britain.
Nationally Scarce	Occurring in 16-100 hectads (10 x 10 km squares) in Great Britain.
Near Threatened	A taxon that is Near Threatened has been evaluated against the IUCN Red List criteria but does not qualify for Red List Threatened categories (i.e. is not Critically Endangered, Endangered or Vulnerable) at the moment, but is close to qualifying for or is likely to qualify for a threatened category in the near future (follows Woods & Coppins, 2012).
Non-lichenized fungi	A fungus that has been traditionally recorded by lichenologists but is not strictly a lichen as it has no photobiont (algal partner).
Oceanic	Species with a 'western' distribution occurring in western Europe extending east to Norway, Denmark and Central France.
Old woodland indicator	Species which are poor colonisers of new woodland habitats and so tend to be associated with long–established or ancient woodland.
Population	A collection of individuals (plants or animals), all of the same species and in a defined geographical area.
Saxicolous	Growing on rock.
Semi-natural	Vegetation which has been modified by humans but is still of significant nature conservation interest because it is composed of native plant species, is similar in structure to natural types and supports native animal communities.
Species	A group of organisms of the same kind which reproduce amongst themselves but are usually reproductively isolated from other groups of organisms.
Terricolous	Growing on the ground. Includes those species growing on soils, decaying vegetation, and low mats of bryophytes and occasionally spreading to overgrow the bases of vegetation at ground level.

APPENDIX 2 ABBREVIATIONS USED IN THE TEXT

BAP	Biodiversity Action Plan
BLS	British Lichen Society
ESIEC	East of Scotland Index of Ecological Continuity
IR	International Responsibility (as defined by Woods & Coppins, 2012)
LC	Least Concern (as defined by Woods & Coppins, 2012)
NR	Nationally Rare
NS	Nationally Scarce
NT	Near Threatened (as defined by Woods & Coppins, 2012)
SAC	Special Area of Conservation
SSSI	Site of Special Scientific Interest
Sc	Species on the Scottish Biodiversity List.

APPENDIX 3 SPECIES LIST

Table 5. The lichens recorded in the study site. Substrate codes are Cort = corticolous; Lic = lichenicolous; Lig = lignicolous; Sax = saxicolous; Terr = terricolous. Small scale habitat codes refer to P (pine), Cf (conifer), Cl (Calluna), Fp (fence post), Sb (Sorbus), Sx (Salix), Vm (Vaccinium myrtillus) with prefixes L and C referring to lignicolous and corticolous respectively. Frequency/abundance is recorded as a DAFOR scores supplemented with the additional categories Scarce and LF = locally frequent. Status refers to the conservation status (following Woods & Coppins 2012) where LC = Least Concern; NS= Nationally Scarce.

BLS no.	Taxon name	Status	Substrate	Small scale habitats	Frequency/ Abundance
2005	*Abrothallus prodiens (LF)*	LC NS	Lic	Lichenicolous on *Hypogymnia physodes*	R
10	*Acarospora fuscata*	LC	Sax		R
69	*Arthonia radiata*	LC	Cort	CSb	R
102	*Aspicilia caesiocinerea*	LC	Sax		R
176	*Baeomyces rufus*	LC			R
2018	*Biatoropsis usnearum (LF)*	LC	Lic		R
192	*Bryoria fuscescens*	LC	Cort+Lig	CP, CFp, CSx, LFp	O
204	*Buellia disciformis*	LC	Cort	CSx	R
430	*Cetraria aculeata*	LC	Terr		Scarce (local along tracks)
360	*Cladonia arbuscula subsp. squarrosa*	LC	Terr		O (LF)
362	*Cladonia bellidiflora*	LC			R
371	*Cladonia chlorophaea s. lat.*	LC	Terr+Lig	LP	O
372	*Cladonia ciliata var. ciliata*	LC	Terr		Scarce
373	*Cladonia ciliata var. tenuis*	LC			Scarce
379	*Cladonia crispata var. cetrariiformis*	LC	Terr		Scarce
1749	*Cladonia diversa*	LC	Terr		O
386	*Cladonia floerkeana*	LC	Terr		R
389	*Cladonia furcata subsp. furcata*	LC	Terr		R

BLS no.	Taxon name	Status	Substrate	Small scale habitats	Frequency/ Abundance
391	*Cladonia glauca*	LC	Terr		R
392	*Cladonia gracilis*	LC	Terr		Scarce
396	*Cladonia macilenta*	LC			R
408	*Cladonia polydactyla var. polydactyla*	LC	Lig	LP	R
409	*Cladonia portentosa*	LC	Terr+Lig+ Cort	LP, CP	A (LD)
411	*Cladonia rangiferina*	LC	Terr		O (LF)
420	*Cladonia strepsilis*	LC	Terr		Scarce
422	*Cladonia subulata*	LC	Terr		R
423	*Cladonia sulphurina*	LC	Terr+Sax		Scarce
426	*Cladonia uncialis subsp. biuncialis*	LC	Terr		O
175	*Dibaeis baeomyces*	LC			Scarce (but locally frequent)
511	*Evernia prunastri*	LC	Cort	CSx, CCl, CP	O (LF)
515	*Fuscidea cyathoides var. cyathoides*	LC	Sax		R (LF)
521	*Fuscidea lightfootii*	LC	Cort	CSx	R
582	*Hypogymnia physodes*	LC	Cort+Sax+Lig	CSx, CCl, LP, CP, LFp	O (LF)
583	*Hypogymnia tubulosa*	LC	Cort	CSx	Scarce
584	*Icmadophila ericetorum*	LC	Terr		R
1033	*Imshaugia aleurites*	LC	Cort	CP	R
636	*Lecanora carpinea*	LC	Cort	CSb	R
641	*Lecanora confusa*	LC	Cort	CSx	R
658	*Lecanora jamesii*	LC	Cort	CSx	R
667	*Lecanora polytropa*	LC	Sax		R
672	*Lecanora pulicaris*	LC	Cort+Lig	CP, LFp	O
688	*Lecanora symmicta*	LC	Cort	CP, CSx	Scarce
743	*Lecidea lithophila*	LC	Sax		Scarce
931	*Lichenomphalia umbellifera*	LC	Terr		Scarce
921	*Ochrolechia androgyna*	LC	Sax		R
1781	*Ochrolechia microstictoides*	LC	Cort+Lig	CCl, CP, LP, LCf	O
556	*Ophioparma ventosa*	LC	Sax		R (LF)
1006	*Parmelia omphalodes*	LC	Sax		R
1015	*Parmelia saxatilis*	LC	Sax		Scarce
1022	*Parmelia sulcata*	LC	Cort	CCl, CP, CSb, CVm, CSx	O (LF)
1066	*Pertusaria corallina*	LC	Sax		Scarce (LF)
1120	*Physcia tenella*	LC	Cort	CSb	R

BLS no.	Taxon name	Status	Substrate	Small scale habitats	Frequency/ Abundance
1735	*Placynthiella dasaea*	LC	Cort	CP	R
732	*Placynthiella icmalea*	LC	Terr		Scarce
788	*Placynthiella uliginosa*	LC	Terr		R
1145	*Platismatia glauca*	LC	Cort+Sax+Lig	CP, LFp, LP	O (LF)
562	*Porpidia cinereoatra*	LC	Sax		R
1790	*Porpidia contraponenda*	LC NS	Sax		R
568	*Porpidia macrocarpa f. macrocarpa*	LC	Sax		R
565	*Porpidia melinodes*	LC NS	Sax		R (LF)
572	*Porpidia tuberculosa*	LC	Sax		R (LF)
633	*Protoparmelia badia*	LC	Sax		R
1193	*Pseudevernia furfuracea var. ceratea*	LC	Cort+Terr	CP	O (LF)
1234	*Ramalina farinacea*	LC	Cort	CSx	R
1235	*Ramalina fastigiata*	LC	Cort	CSx	R
1257	*Rhizocarpon geographicum*	LC	Sax		R (LF)
1355	*Stereocaulon evolutum*	LC	Sax		R
692	*Trapeliopsis flexuosa*	LC	Lig	LCf	R
727	*Trapeliopsis granulosa*	LC	Cort+Terr	CP	Scarce
327	*Tuckermannopsis chlorophylla*	LC	Cort	CSx	R
1446	*Umbilicaria cylindrica*	LC	Sax		R
1468	*Usnea hirta*	LC	Cort	CCl, CP	O
1471	*Usnea subfloridana*	LC	Cort	CSx	O?
1640	*Usnea wasmuthii*	LC NS	Cort	CP	Scarce?
908	*Violella fucata*	LC	Cort	CP	Scarce ?
1530	*Xanthoria parietina*	LC	Cort	CSb	R

Forestry Commission Scotland

Monument: Carn a Chait, cairn
SM ref: 4727

Forest District:	**North Highland**
Plan start:	**01/04/10**
Plan finish:	**31/03/20**
MMP class:	**2**
Grid ref:	**NH716864**
National Monuments Record:	**NH78SW 7**
FC ref:	**4727**
Compartment:	**108**
HS Casework area:	**NW**
MMP prepared by:	**S Fraser**
Site visit: (Date)	**30/03/10**
(Attendees)	**A Coombs**

View facing S (30/03/10).

[1] GENERAL DESCRIPTION

Carn a Chait is situated in an extended clearing within in a conifer plantation. All the trees which were within the scheduled area have been felled without disturbance to the root system, and were been treated with a chemical to inhibit regrowth. The cairn is situated on a flat area of ground above the Edderton Burn. It consists of a roughly circular mound of stones measuring c. 20m in diameter and up to 1.5m in height. There are no obvious kerbstones or internal features showing through the stones. However, a boundary stone has been set up into the body of the cairn and has been inscribed with a T on one side and a C on the other.

Anderson described the site as a broch in 1873 while the OS recorded the site as “a circular cairn of bare rubble stone 16.0m in diameter and with a maximum height of 1.5m. There is no sign of any chamber or cist. Apart from its circularity there is nothing visible to suggest that it had been a broch. There is no evidence of a wall nor of any of the stone being dressed, though the position of the cairn at the head of the strath overlooking an area of cultivated land is, perhaps, not unsuitable for a broch.”

The area protected by scheduling is irregular on plan and measures c. 40m from NE to SW by c. 36m transversely, centred on the cairn. This area includes the cairn and an area around it within which traces of activities associated with its construction and use may be expected to survive.

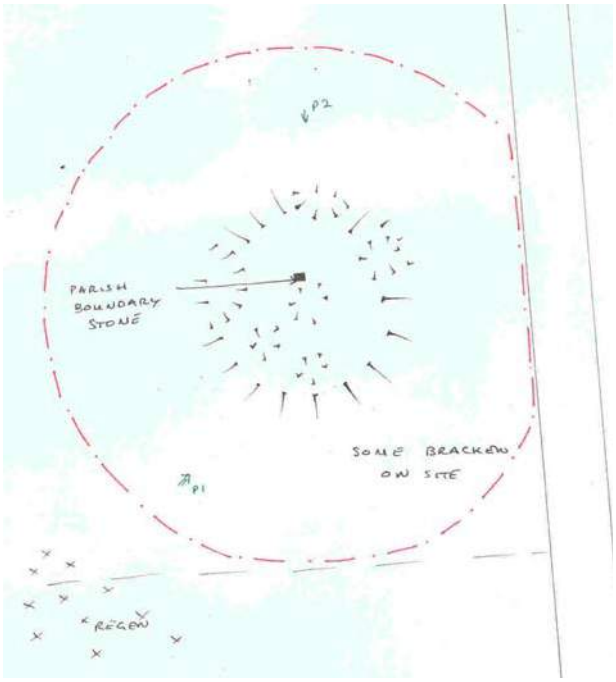
[2] HISTORIC SCOTLAND MONUMENT WARDEN REPORT(S)

Date of visit	Site Condition Score	Deterioration Risk Score	Historic Scotland Priority Index
30/03/10	2	1	2.24

[3] OBJECTIVES OF MANAGEMENT

Objective	***General aims and objectives***
CONSERVATION	The main objective of management is to ensure the stable condition of the monument.
ACCESS	Access to the monument will continue.
INTERPRETATION	Interpretation is not appropriate at this site.
SETTING	The cairn is situated in open ground.

[4] ISSUES REQUIRING ATTENTION: POTENTIAL OR EXISTING THREATS

Issue	***General descriptions with specific details***
CONDITION OF MONUMENT *Historic Scotland Monument Warden report (23/03/10)*  *Extract from MW sketch plan (not to scale)*	*The site lies within the Morangie Forest conifer plantation on the lower SW facing slope of Cnoc an t-Sabhail. The monument, a cairn, lies to the W of an old track through the wood and to the E of the forestry boundary fence in an area of cleared ground. The cairn is c.15m in diameter and c.1.5m high with no indication of a chamber but many scoops in the stone. There is a small rectangular stone set into the cairn stone with the letters C and I on its E and W faces respectively. This appears to be one of a series of way markers or Parish boundary markers around Tain. The site was visited when there was still snow on the monument but it appears to be in a stable condition. There is still some bracken on the site and a little regen ideally the bracken will be sprayed when appropriate and the regen removed. There is a group of large regen trees within 20m of the scheduled area ideally these should be removed.*
FOREST OPERATIONS (if appropriate)	The date of felling surrounding area is

	estimated to be **outwith the plan period**. Thinning will take place in the surrounding crop within the plan period. The work will be planned and organised to avoid any damage to the monument in the course of harvesting and timber extraction. No replanting will take place within the scheduled area.
BUFFER ZONE	A buffer zone of 20m will be retained.
VEGETATION / NATURAL REGENERATION	There is some bracken and regenerating trees within and around the scheduled area.
PUBLIC AND OTHER ACCESS	The Scottish Outdoor Access Code ensures the public right to responsible access.

[5] SPECIFIC WORK PROPOSED IN THE PLAN PERIOD

The following operations are proposed within the Plan Period:

Detail of work	**Detail of time / condition of response**
Monitor the condition of the monument and ensure the removal of all intrusive scrub vegetation and regeneration.	If required, clearance will occur at least once every year and will be undertaken by FCS Forest District staff or contractors. All scrub vegetation and naturally regenerating trees within the scheduled area will be cut off at ground level using appropriate hand or power tools and removed. Any seedlings will be removed by pulling out by hand. Bracken encroachment shall be controlled throughout the scheduled area as necessary on an annual basis through strimming and/or chemical spraying, as appropriate.
	No work will be undertaken in the scheduled area other than work previously agreed with Historic Scotland and detailed in this plan.

[6] ARRANGEMENTS FOR MONITORING

Type of monitoring	Detail of recording
FCS staff will formally inspect the condition of the monument once every five years and alongside the Historic Scotland Field Monument Warden during the next scheduled visit within the Historic Scotland Field Monument Warden programme.	A brief file note will be prepared describing the condition of the site as found. A copy of this file note will be sent to the FCS Archaeologist.

AGREEMENT TO THE PLAN

This is an agreement under section 17 of the Ancient Monuments and Archaeological Areas Act 1979. Only works which are carried out in fulfilment of the Occupier's obligations and which are specifically identified in this Agreement are deemed to have been granted Scheduled Monument Consent under the Ancient Monuments Class Consents Order *(Scotland)* 1996. The Occupier must apply for the Consent of the Scottish Ministers prior to undertaking any further works affecting the Area.

Signed on behalf of Forestry Commission
by: **FCS Archaeologist**
Date of signature:

Signed by Historic Scotland on behalf of the
Scottish Ministers by:
Date of signature:

Forestry Commission Scotland

Monument: Carn Liath Long Cairn
SM ref: 4752

Forest District: North Highland
Plan start: 01/04/2013
Plan finish: 31/03/2023
MMP class: 2

Grid ref: NH 730 798
National Monuments Record Number: NH77NW010
HS Casework area: NW

MMP prepared by: L Fraser
Site visit: (Date) 1st August 2012
(Attendees) Steven Birch, Lynn Fraser

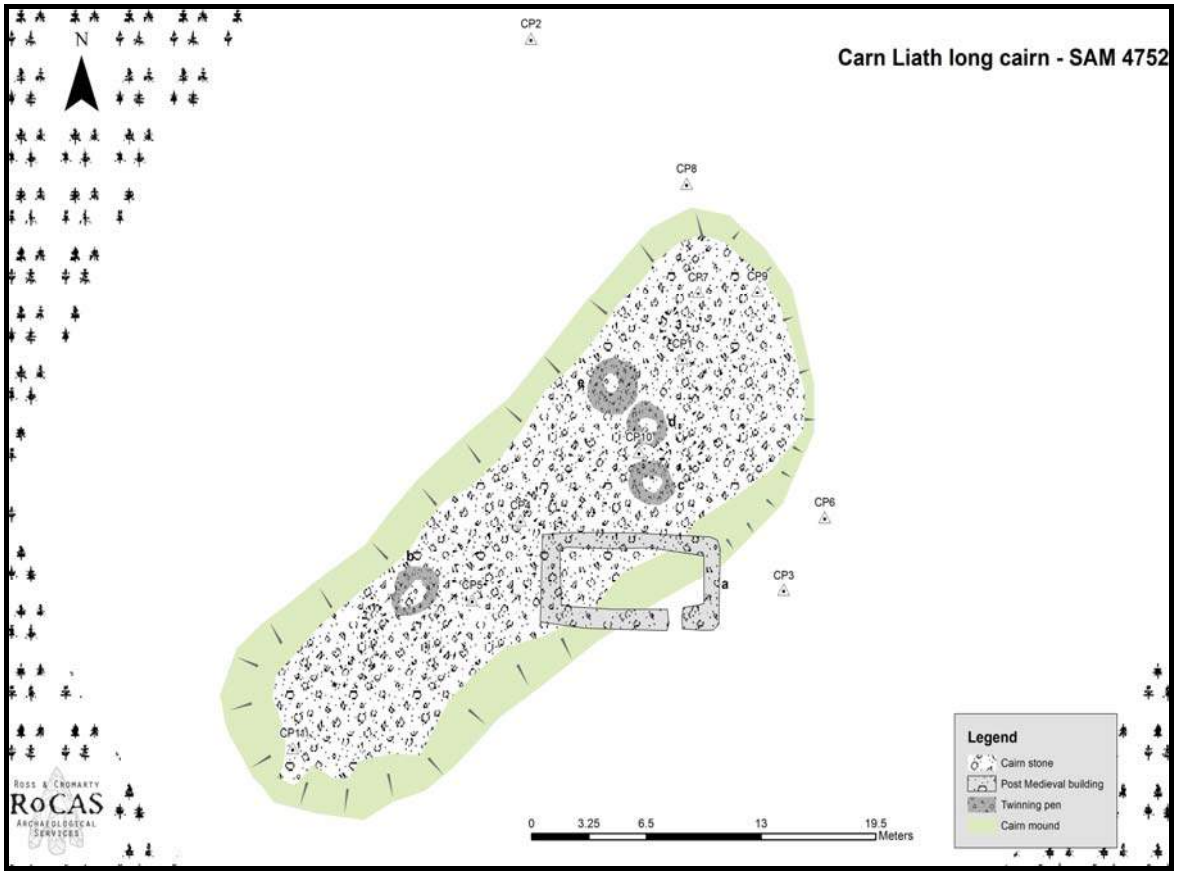
Carn Liath long cairn, facing S (CP2)

Looking down the length of the cairn, facing SSW (CP1)

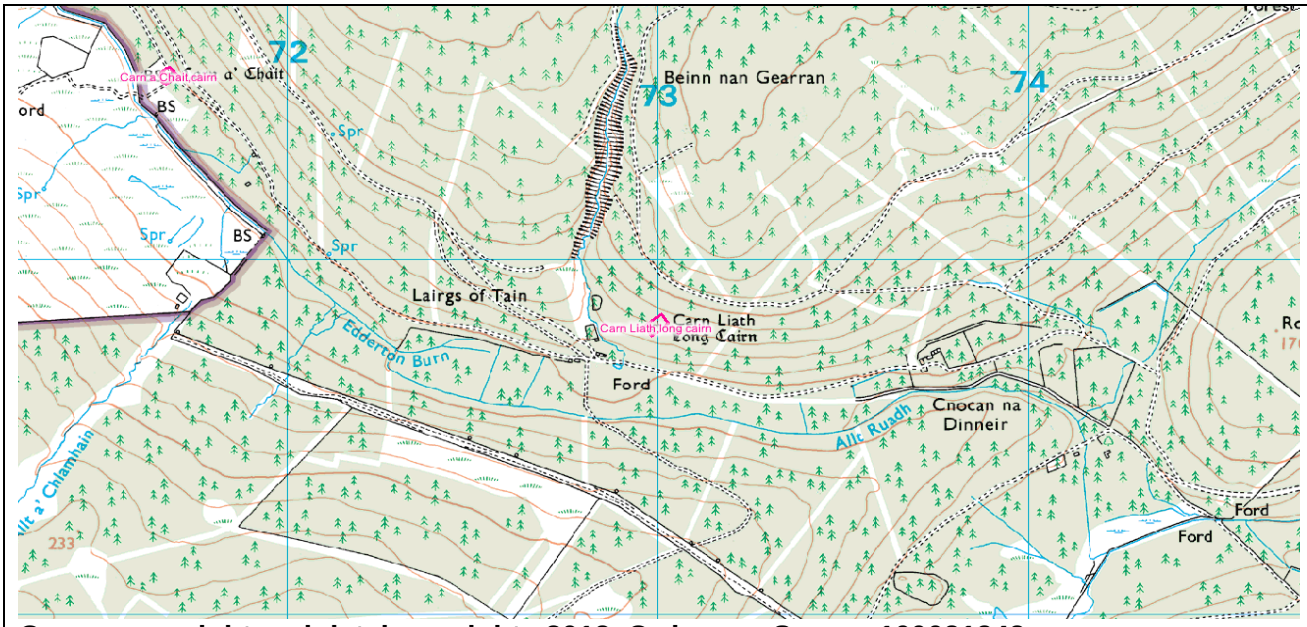
Looking up the cairn with the gable wall of the later building to the right (marked by the scale pole), facing ENE (CP5)

[1] GENERAL DESCRIPTION

Carn Liath long cairn is subrectangular chambered cairn measuring approximately 35m NE-SW by 14m at the NE end and 8m at the SW end. It is situated in a clearing on the SW-facing slope of Beinnan Gearrean surrounded by mature conifers. The entire cairn is visible and comprises a mix of bare small and medium subangular stones. It has suffered a large degree of interference; the top of the cairn has a pock-marked appearance with a multitude of subcircular hollows where quarrying has taken place and twinning pens constructed. The wall of a post medieval building has been built onto the SE side of the cairn.



Chambered tombs are large structures for communal burial, dating from the Neolithic period (c. 4,400 BC – 2,900 BC). Most would have originally consisted of a burial chamber and entrance passage covered by an earthen barrow or stone cairn. Chambered tombs were built and used by local communities over long periods of time. There appear to be many regional traditions and variations in shape and construction. The monument has significant archaeological potential to enhance our knowledge of prehistoric ritual and burial rites, social organisation and the environment.



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The scheduled area measures 55m NE-SW by 35m to include the cairn and an area around it in which traces of activities associated with its use will survive.

[2] HISTORIC SCOTLANDMONUMENT WARDEN REPORT(S)

Date of visit	Site Condition Score	Deterioration Risk Score	Historic Scotland Priority Index
05/03/2008	1	1	1.4

[3] OBJECTIVES OF MANAGEMENT

Objective	***General aims and objectives***
CONSERVATION	The main objective of management is to ensure the stable condition of the monument and to ensure that the monument and its surrounding area are kept free of trees, scrub and bracken, thereby preserving both the archaeological remains and their setting.
ACCESS	The objective is to maintain and improve public access to the monument, and to enhance its setting in the wider landscape. The cairn can be accessed from a rough track leading off the main forest track.
INTERPRETATION	No interpretation is recommended for this site.
SETTING	The monument is situated within a clearing in conifer plantation. It can be seen from the forest track but is not immediately obvious as there are trees from below the cairn to the forest track.

[4] ISSUES REQUIRING ATTENTION: POTENTIAL OR EXISTING THREATS

CONDITION OF MONUMENT

The monument lies in a clearing within conifer plantation on the SW facing slope of Beinnan Gearrean. It is aligned NE-SW and measures approximately 35m on this axis. It is about 14m wide at the NE end and 8m wide at the SW end. It would appear to have tumbled somewhat downslope and this will have added to its length. The entire monument is visible, but has suffered from anthropogenic interference. Several hollows have been created in the surface of the cairn through quarrying activities, probably for the construction of buildings in the vicinity, and the construction of twinning pens on the monument itself. A Post Medieval building, which is in a ruinous state, has its gable end built onto the SE side of the cairn.

Although generally clear of vegetation at present, there are indications that vegetation is beginning to encroach on the cairn. There is a large swathe of bracken on the SE side of the cairn, which is beginning to cover this edge and move into the centre, particularly at the SW end. There are several self-set conifers throughout the cairn, which favour the hollows. Self-set conifers are also present in the scheduled area.

Historic Scotland Field Officer report (05/03/2008):

The trees mentioned in the previous report have been removed and regen has been cut and pulled regularly. There are no trees within the scheduled area but it is likely that there are some trees within 20m of the scheduled area, these will be taken back at the next opportunity. There is a little bracken in the around the cairn. Ideally the bracken should be sprayed and then monitored and resprayed if necessary. The monument is in a stable and good condition and monitoring and clearance of regen should continue.

Issue	***General descriptions with specific details***
FOREST OPERATIONS (*if appropriate*)	All forestry operations in the surrounding area will be planned and organised to avoid any damage to the monument in the course of harvesting and timber extraction. No replanting will take place within the scheduled area.
BUFFER ZONE	An unplanted buffer zone of 20m will be retained around the scheduled area.
VEGETATION / NATURAL REGENERATION	Conifer regeneration will have to be removed and thereafter monitored and managed. Ideally the bracken should be sprayed and then monitored and managed.
PUBLIC AND OTHER ACCESS	The Scottish Outdoor Access Code ensures the public right to responsible access.

[5] SPECIFIC WORK PROPOSED IN THE PLAN PERIOD

The following operations are proposed within the Plan Period:

Detail of work	Detail of time / condition of response
Monitor the condition of the monument and ensure the removal of all intrusive scrub vegetation and regeneration.	If required, clearance will occur at least once every five years and will be undertaken by Forest District staff or contractors. All scrub vegetation, bracken and naturally regenerating trees on and around the upstanding structures will be cut off at ground level using appropriate hand or power tools and removed. Where necessary the cut roots of invasive vegetation will be poisoned with an appropriate herbicide.
	No work will be undertaken in the scheduled area other than work previously agreed with Historic Scotland and detailed in this plan.

[6] ARRANGEMENTS FOR MONITORING

Type of monitoring	Detail of recording
FCS staff will formally inspect the condition of the monument once every five years and alongside the Historic Scotland Field Monument Warden during the next scheduled visit within the Historic Scotland Field Monument Warden programme.	The Forest District will record when any major management action (described within this plan) was undertaken (i.e. year action undertaken) within the Designated Historic Assets Register.

AGREEMENT TO THE PLAN

This is an agreement under section 17 of the Ancient Monuments and Archaeological Areas Act 1979. Only works which are carried out in fulfilment of the Occupier's obligations and which are specifically identified in this Agreement are deemed to have been granted Scheduled Monument Consent under the Ancient Monuments Class Consents Order *(Scotland)* 1996. The Occupier must apply for the Consent of the Scottish Ministers prior to undertaking any further works affecting the Area.

Signed on behalf of Forestry Commission Scotland by: **FCS Archaeologist**
Date of signature:

Signed by Historic Scotland on behalf of the Scottish Ministers by:
Date of signature:

Carn Liath long cairn (August 2012 photographic register)

No.	Direction Facing	Camera Position	Notes	Taken By	Date
1	SSW	1	Looking down the cairn, over the valley	LF	01/08/2012
2	WSW	1	Looking down the cairn, nearest pole at the corner of the post-medieval building	LF	01/08/2012
3	S	2	Extent of the cairn	LF	01/08/2012
4	W	3	Looking into the post-medieval building	LF	01/08/2012
5	SSW	4	Gable wall of the post-medieval building	LF	01/08/2012
6	ENE	5	Gable wall and looking up the cairn	LF	01/08/2012
7	NW	6	Hollows in the top of the cairn	LF	01/08/2012
8	SE	7	Hollows in the top of the cairn	LF	01/08/2012
9	SW	8	N edge of cairn	LF	01/08/2012
10	S	9	SE edge of the cairn showing encroaching bracken	LF	01/08/2012
11	SSW	10	Twinning pen	LF	01/08/2012
12	NE	11	Looking up the cairn	LF	01/08/2012

Forestry Commission Scotland

Monument: Carn na Croiche chambered cairn
SM ref: 4750

Forest District:	**North Highland**
Plan start:	**01/03/2010**
Plan finish:	**31/03/2020**
MMP class:	**2**
Grid ref:	**NH656722**
National Monuments Record Number:	**NH67SE011**
FC ref:	**1124**
Compartment:	**74 a**
HS Casework area:	**North West**
MMP prepared by:	**Malcolm Macdougall**
Site visit: (Date)	**11/05/09**
(Attendees)	**Anne Coombs/Peter Mackay**

view facing NE and 11/05/09

[1] GENERAL DESCRIPTION

The monument comprises a chambered cairn of dating from the Neolithic or Early Bronze Age. Chambered cairns are used as funerary structures, and contain stone lined chambers in which the remains of the dead were placed. These monuments usually contained several burials, and some show long sequences of construction and reuse.

The cairn is situated in a clearing in a pine plantation near the summit of Cnoc Navie overlooking the lower reaches of the River Alness and Cromarty Firth. It consists of a mound of stones, mostly covered in vegetation, measuring some 20m in diameter. A bank of varying degrees of clarity defines the perimeter of the cairn. On the N side of the cairn a section of this bank measuring about 1.5m E-W is partly clear, exposing some stones. Near the center of the cairn, eight upright stones indicate the position of the burial chamber and passage.

The area protected by scheduling is a circle, 45m in diameter, centered on the cairn. This area includes the cairn and an area around it in which traces of activities associated with its construction and use may be expected to survive, as shown on the scheduling certificate (see appendix 1).

[2] HISTORIC SCOTLAND MONUMENT WARDEN REPORT(S)

Date of visit	Site Condition Score	Deterioration Risk Score	Historic Scotland Priority Index
11/05/09	3	2	3.61

[3] OBJECTIVES OF MANAGEMENT

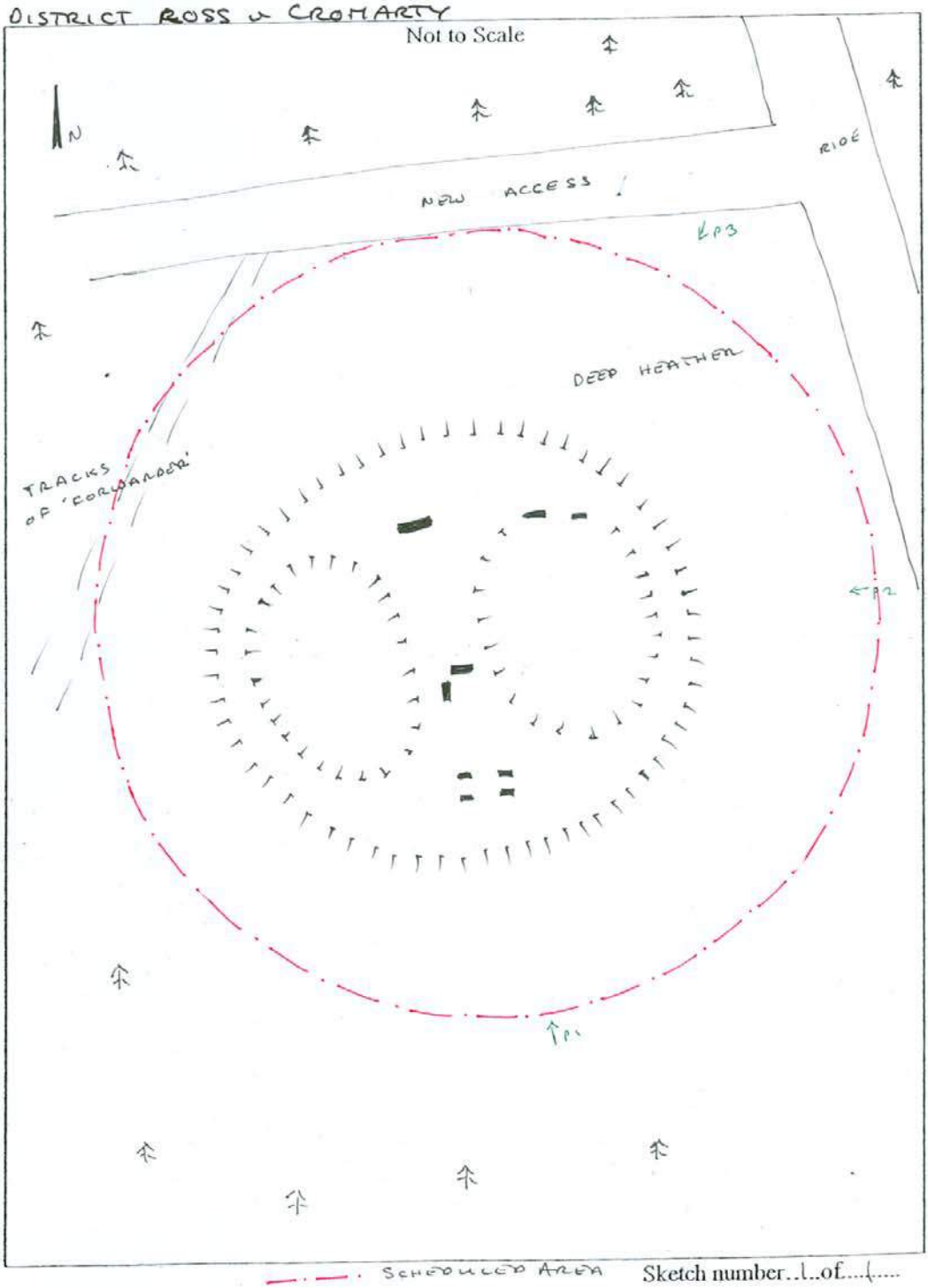
Objective	***General aims and objectives***
CONSERVATION	To preserve and prevent further damage to the monument.
ACCESS	Access to the site will be maintained via the existing forest ride network.
INTERPRETATION	No interpretation is planned for this site.
SETTING	The setting will be improved through the design plan process once the trees are felled in 2016.

HS WARDEN SKETCH SHEET Index No 4750

Monument CARN na CAOICHE, chambered cairn

Council Area HIGHLAND Initials of MW A.C Date of Visit 11.05.09 Visit No 05

DISTRICT ROSS & CROMARTY



Sketch number 1 of 1

[4] ISSUES REQUIRING ATTENTION: POTENTIAL OR EXISTING THREATS

Issue	***General descriptions with specific details***
CONDITION OF MONUMENT	11-MAY-2009, AC The site lies on the SW edge of Cnoc Navie within Cnoc Navie conifer plantation. The monument, a chambered cairn has had much of the cairn stone removed in the distant past. The cairn appears to be c.20m in diameter and consists of a low stony bank with several hollows within the cairn. In one of the hollows near the centre of the cairn there are up to 8 visible stones that indicate the chamber. The cairn was within a small clearing in the conifer forest in the past; this has been cleared over a number of years and as there is more light getting into the area the vegetation has increased. The cairn is covered with blaeberries and heather and the features are more difficult to identify. Tree clearance has taken place in the last year and the machines have passed close to the N and W of the cairn, possibly on the very edge of the scheduled area. Ideally this cairn should be more clearly identified as a protected site to prevent this occurring again. There is an old track to the E of the cairn and it is possible that this may be used again in the future when work takes place in the area. The conifers have been removed from the scheduled area and ideally in the future they will be taken back further to ensure that if there is any windblow this will not fall onto the cairn. At present regen is not a problem but the site should be monitored in the future.
FOREST OPERATIONS (if appropriate)	The date of harvesting surrounding area is estimated to be **2016**. The work will be planned and organised to avoid any damage to the monument in the course of harvesting and timber extraction. No replanting will take place within the scheduled area.
BUFFER ZONE	A buffer zone is considered inappropriate in this case as the scheduled area already defines a large open space. A buffer will be created following clear felling in 2016.
VEGETATION / NATURAL REGENERATION	Blaeberry and heather are prominent on this site and are probably restricting the amount of regeneration.
PUBLIC AND OTHER ACCESS	The Scottish Outdoor Access Code ensures the public right to responsible access.

WATERCOURSE MANAGEMENT	NA
etc	

[5] SPECIFIC WORK PROPOSED IN THE PLAN PERIOD

The following operations are proposed within the Plan Period:

Detail of work	**Detail of time / condition of response**
Clear fell surrounding trees.	The trees surrounding the bulk of the site will be clear felled in 2016. The remaining Granny pines will also be removed if they area threat to the archaeology.
Restocking	Trees will not be planted within 20m of the scheduled area and an suitable access will be maintained.

[6] ARRANGEMENTS FOR MONITORING

Type of monitoring	**Detail of recording**
Vegetation / regeneration	The site will get a visual inspection annually and any regeneration removed within one year.

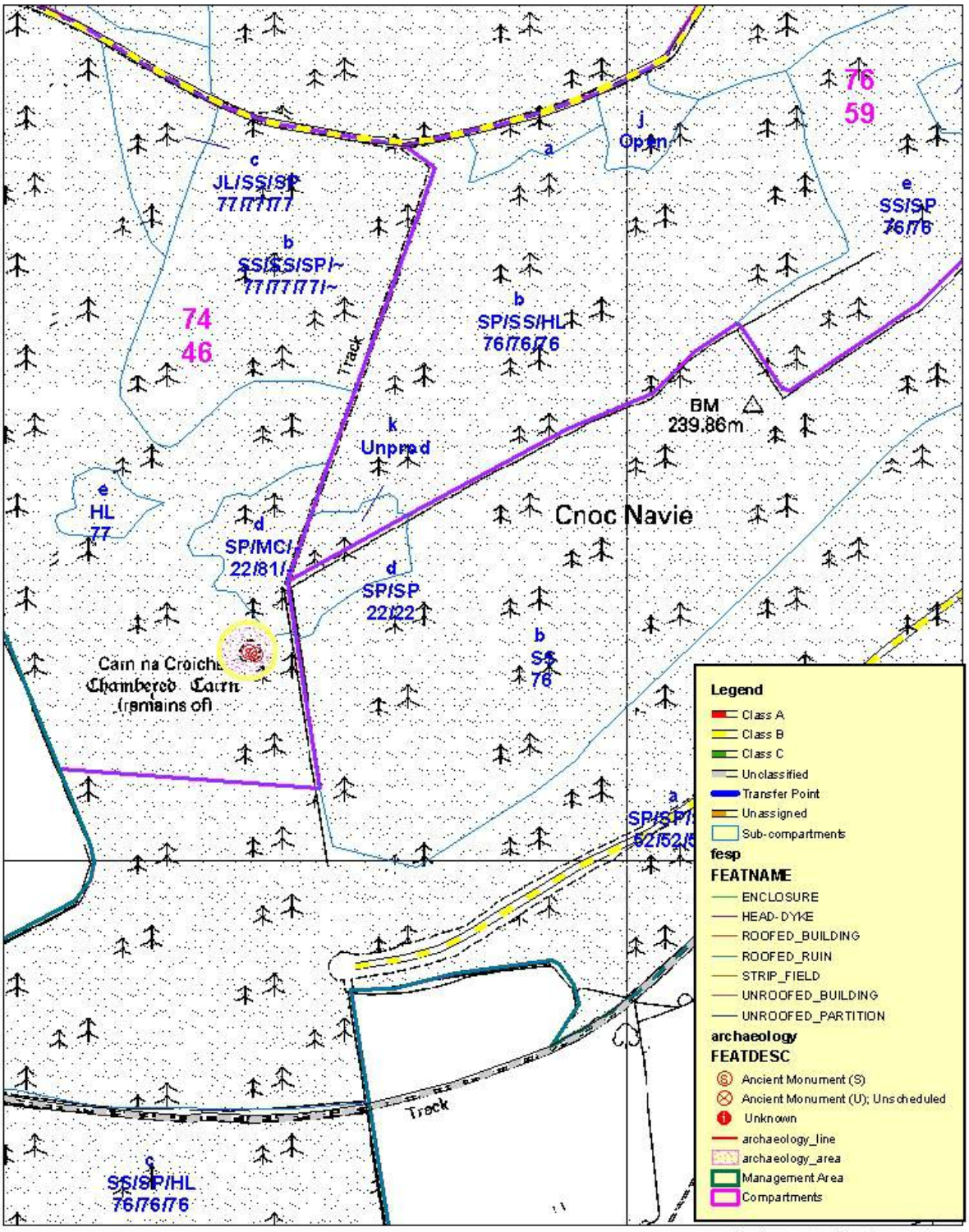
[7] 1:5000 MAP

Forestry Commission Scotland

SAM 4750

North Highland Forest District

20th July 2009



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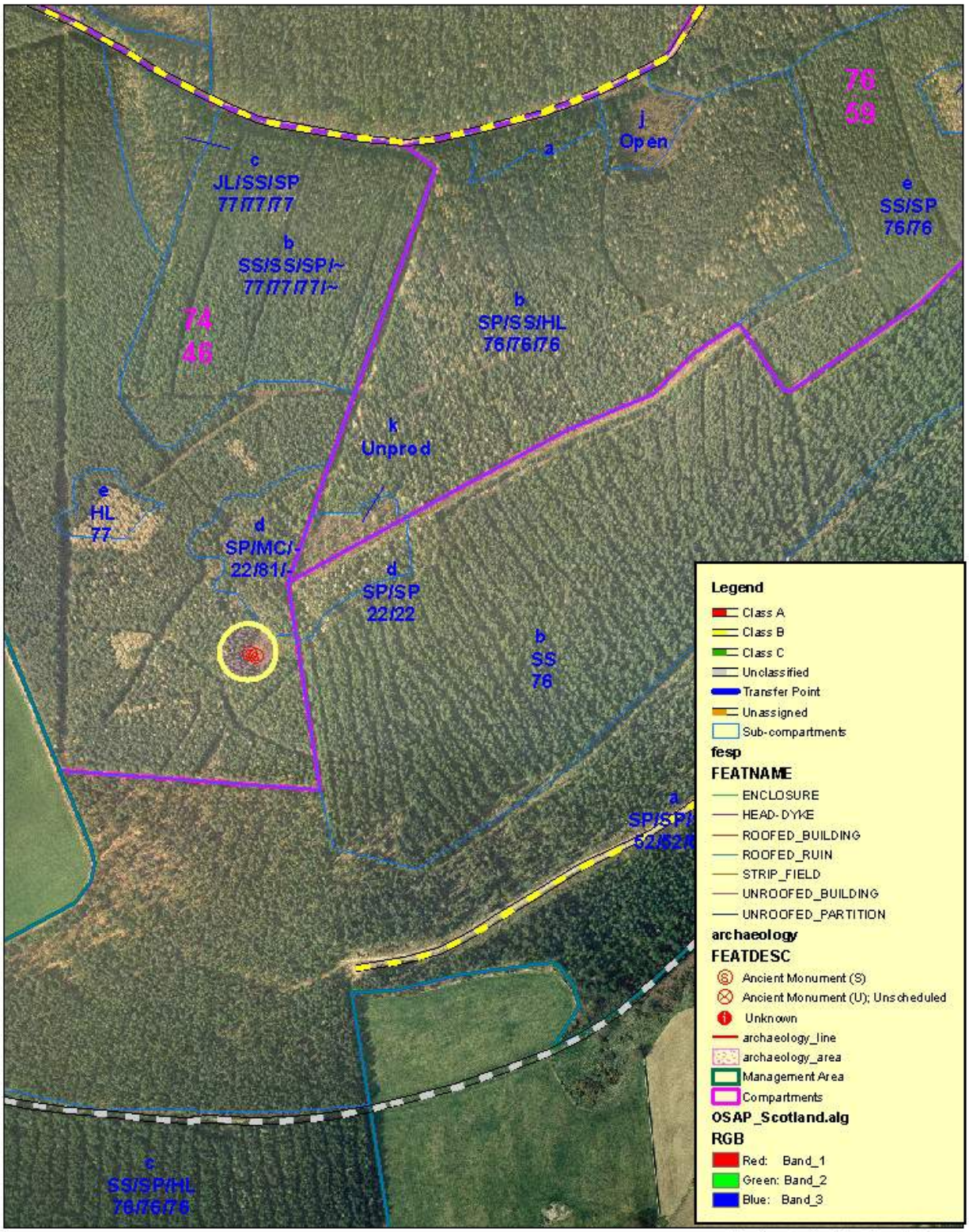
Forestry Commission Scotland

SAM 4750

North Highland Forest District

20th July 2009



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AGREEMENT TO THE PLAN

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Signed on behalf of Forestry Commission
by:
Date of signature:

Signed by Historic Scotland on behalf of the
Scottish Ministers by:
Date of signature:

Monument:	**Creag an Fhithich, fort, Dounie Wood**
SM ref:	**10942**
Forest District:	**North Highland**
Plan start:	**01/04/10**
Plan finish:	**31/03/15**
MMP class:	
Grid ref:	**NH685867**
National Monuments Record Number:	**NH68NE 87**
FC ref:	**10942**
Compartment:	**135**
HS Casework area:	**North West Team**
MMP prepared by:	**Malcolm Macdougall**
Site visit: (Date)	**09/03/10**
(Attendees)	**Anne Coombs/Peter Mackay**

view facing North date 09/03/10

HS WARDEN SKETCH SHEET

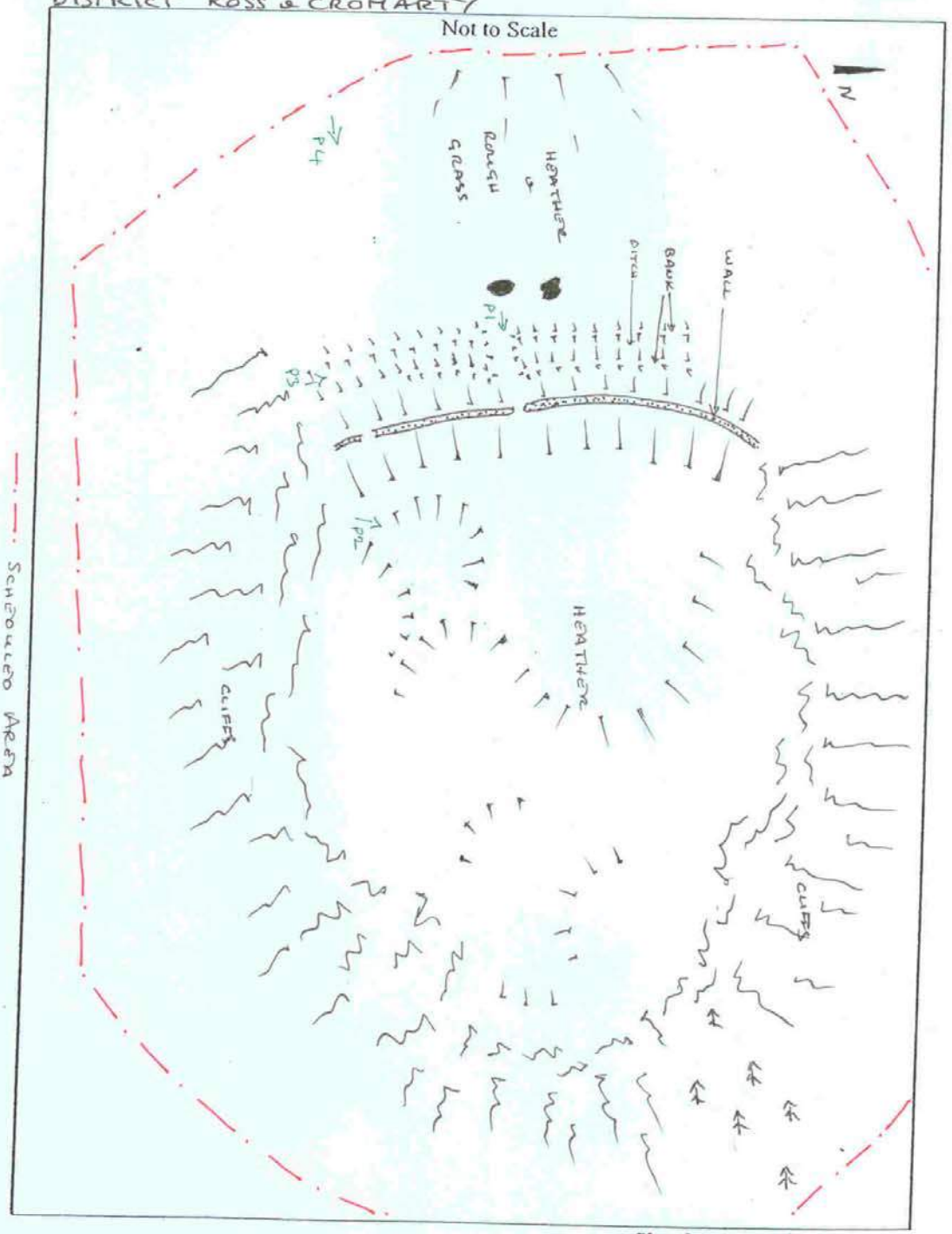
Index No 10942

Monument CREAG an FHITHICH, Part, Dounie Wood

Council Area HIGHLAND Initials of MW A.C Date of Visit 09.03.2018 Visit No 03

DISTRICT ROSS & CROMARTY

Not to Scale



Sketch number 1 of 1

[1] GENERAL DESCRIPTION

The monument comprises the remains of a fort of probable late prehistoric date.

The fort is set on Creag an Fhithich, a rocky eminence on the W slope of Struie Hill at about 125m above sea level. A ditch runs N-S at the foot of a slight slope on the W. Just E of the ditch and a short distance upslope are the remains of a substantial dry stone wall. There are traces of circular depressions within the enclosed area.

The monument was scheduled in 2003.

[2] HISTORIC SCOTLAND MONUMENT WARDEN REPORT(S)

Date of visit	Site Condition Score	Deterioration Risk Score	Historic Scotland Priority Index
09/03/10	2	2	2.83

[3] OBJECTIVES OF MANAGEMENT

Objective	***General aims and objectives***
CONSERVATION	To ensure that the monument and its surrounding area are kept free of trees and scrub, thereby preserving both the archaeological remains and their setting. To maintain and improve access to the monument, and to enhance its setting in the wider landscape.
ACCESS	Access to the site will be maintained as a strimmed trail which will follow a route agreed with Historic Scotland.
INTERPRETATION	Interpretation is planned for the site in 2010 in the form of a panel which will be located at a suitable viewpoint outside the scheduled area.
SETTING	The setting of this fort will be improved with the removal of Spruce trees to the north which currently restrict the view from the site.

[4] ISSUES REQUIRING ATTENTION: POTENTIAL OR EXISTING THREATS

Issue	***General descriptions with specific details***
CONDITION OF MONUMENT	09-MAR-2010, AC The site lies on the N slope of Struie Hill on a rocky crag, Creag an Fhithich, within Dounie Wood, a conifer plantation. The monument, a fort occupies the top of the crag and is protected by steep rocky cliffs on the N and E and a steep slope on the S. The W slope is the natural approach and access to the top of the crag is protected by an outer bank, ditch and inner bank with an inner stone wall. Approximately at the centre of the W approach there appears to be an entrance route across the ditch and an opening in the wall. Beyond the ditch to the W there are 2 large earthfast boulders which may also be associated with the entrance way. The ditch is c.2m wide and has a second crossing at the S end which may be a secondary entrance. The wall is set into the slope of the crag and is tumbled with 2-3 courses visible at the base. It is c.0.25m high and c.0.5m wide and appears to extend to the edges of the cliffs to the N and S. The interior of the fort has no upstanding features but there are at least 2 sub-circular scoops which may suggest structures. There are a few whin and broom bushes within the fort and at the E end there are conifers as noted in the previous report. There are a few regen conifers within the scheduled area. The planned path is to be constructed during 2010 and will terminate before the scheduled area. When the path is built the regen will be removed, the scrub controlled and any trees within the scheduled area will be felled and removed. There is some bracken on the monument and this will be treated as appropriate and monitored.
FOREST OPERATIONS (if appropriate)	The date of harvesting surrounding area is estimated to be **2010**. The work will be planned and organised to avoid any damage to the monument in the course of harvesting and timber extraction. No replanting will take place within the scheduled area.
BUFFER ZONE	A buffer zone is considered inappropriate in this case as the scheduled area already defines a large open space.

VEGETATION / NATURAL REGENERATION	Regeneration will be cut manually at ground level and removed from the scheduled area.
PUBLIC AND OTHER ACCESS	The Scottish Outdoor Access Code ensures the public right to responsible access.
WATERCOURSE MANAGEMENT	NA
etc	

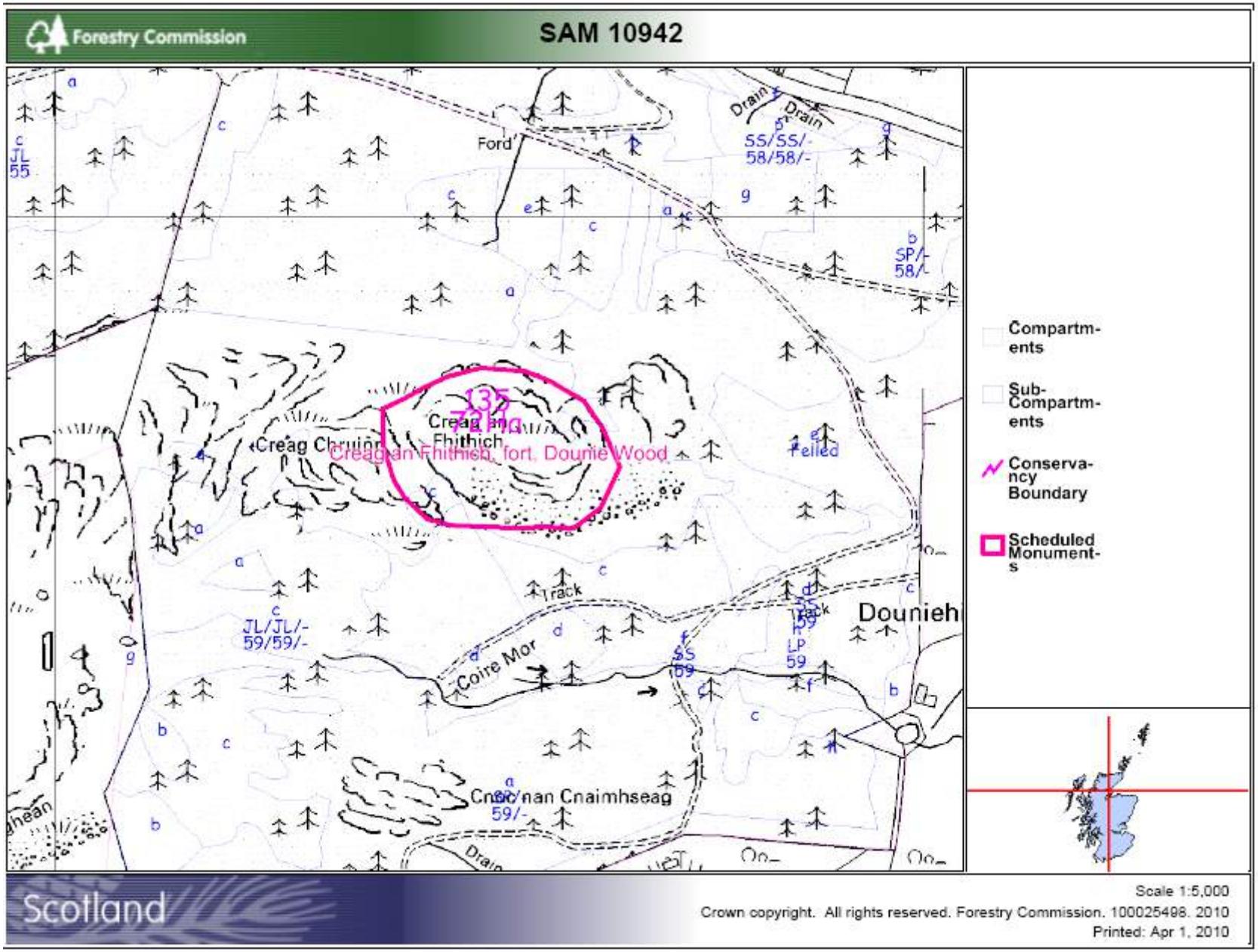
[5] SPECIFIC WORK PROPOSED IN THE PLAN PERIOD

The following operations are proposed within the Plan Period:

Detail of work	**Detail of time / condition of response**
Strim path	The route agreed with Historic Scotland will be strimmed annually to maintain a clear and visible access for visitors to the site
Cut regeneration	Regeneration will be cut by 2011 once the new path has been created. Regen will be cut manually at ground level and removed from the scheduled area.
Spray bracken	Bracken will be sprayed annually from 2010 until it has been eradicated from the scheduled area.
Fell Spruce	A small pocket of Spruce trees just inside the edge of the scheduled area will be felled in the summer of 2010. There are no features within the area to be felled. All timber will be removed from the site.

[6] ARRANGEMENTS FOR MONITORING

Type of monitoring	**Detail of recording**
The site will be visited annually and inspected for damage and regeneration.	Regeneration will be recorded and included in the work programme for removal within one year. Excessive damage within the scheduled area will be recorded and Historic Scotland informed.


Forestry Commission
SAM 10942
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Track
Dounieh
Coire Mor
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Compartm-ents
Sub-Compartm-ents
Conserva-ncy Boundary
Scheduled Monument-s
Scotland
Scale 1:5,000
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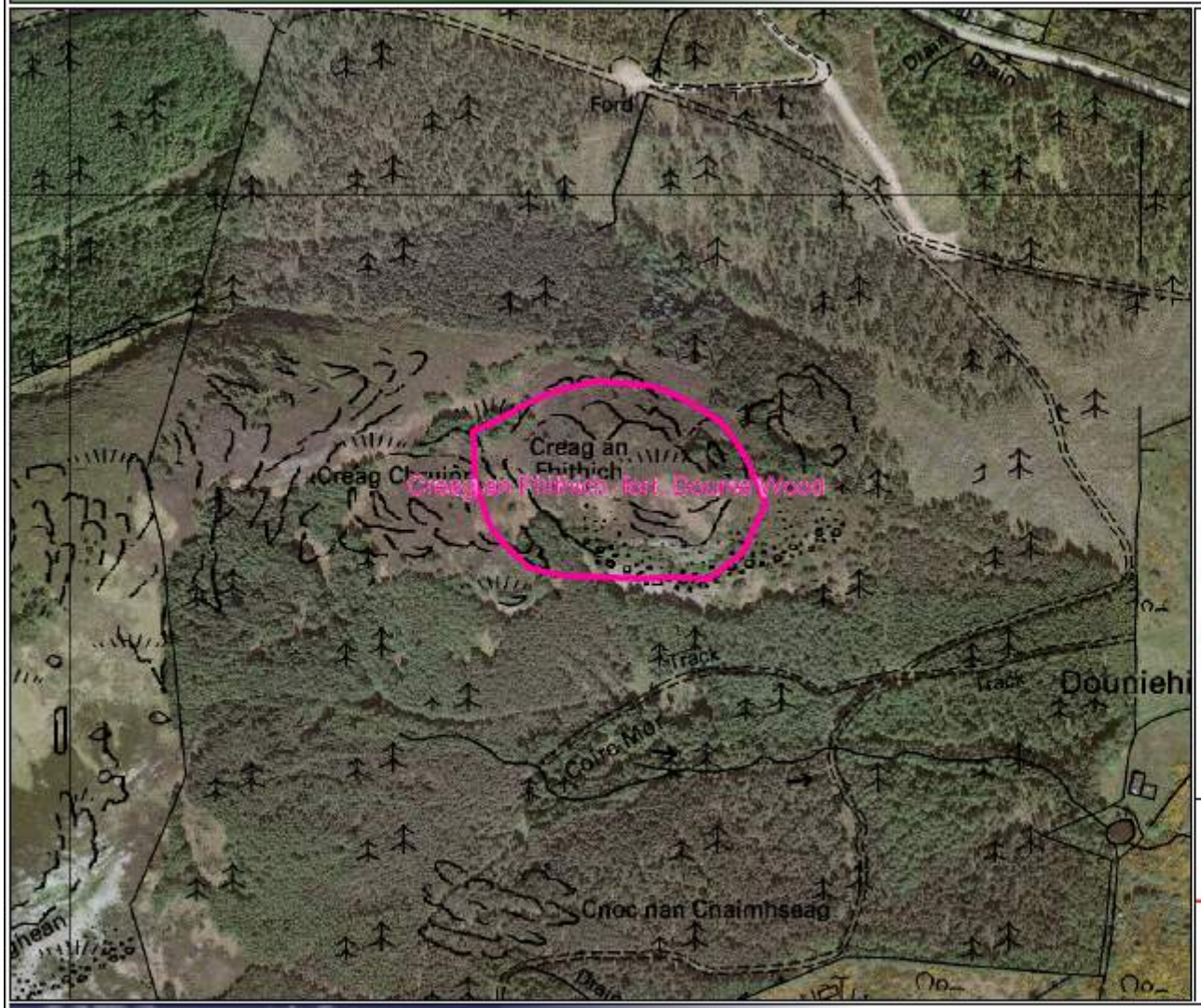
Printed: Apr 1, 2010

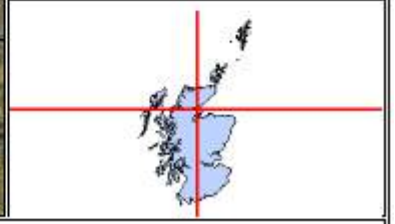
Forestry Commission

SAM 10942



Conserva-ncy Boundary

Scheduled Monument-s



Scotland

Scale 1:5,000

Printed: Apr 1, 2010

AGREEMENT TO THE PLAN

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Signed on behalf of Forestry Commission
by:
Date of signature:

Signed by Historic Scotland on behalf of the
Scottish Ministers by:
Date of signature:

Monument: Lamington Park long cairn
SM ref: 3129

Forest District: North Highland
Plan start: 01/04/2013
Plan finish: 31/03/2023
MMP class: 2

Grid ref: NH 74729 77981
NMRS Number: NH77NW 2
HS Casework area: NW

MMP prepared by: S Birch, M Peteranna
Site visit: (Date) 31st July 2012
(Attendees) Steven Birch, Lynn Fraser

SW end of cairn with dense ground vegetation of heather, bilberry, bracken and some self-set trees, facing E (CP8)

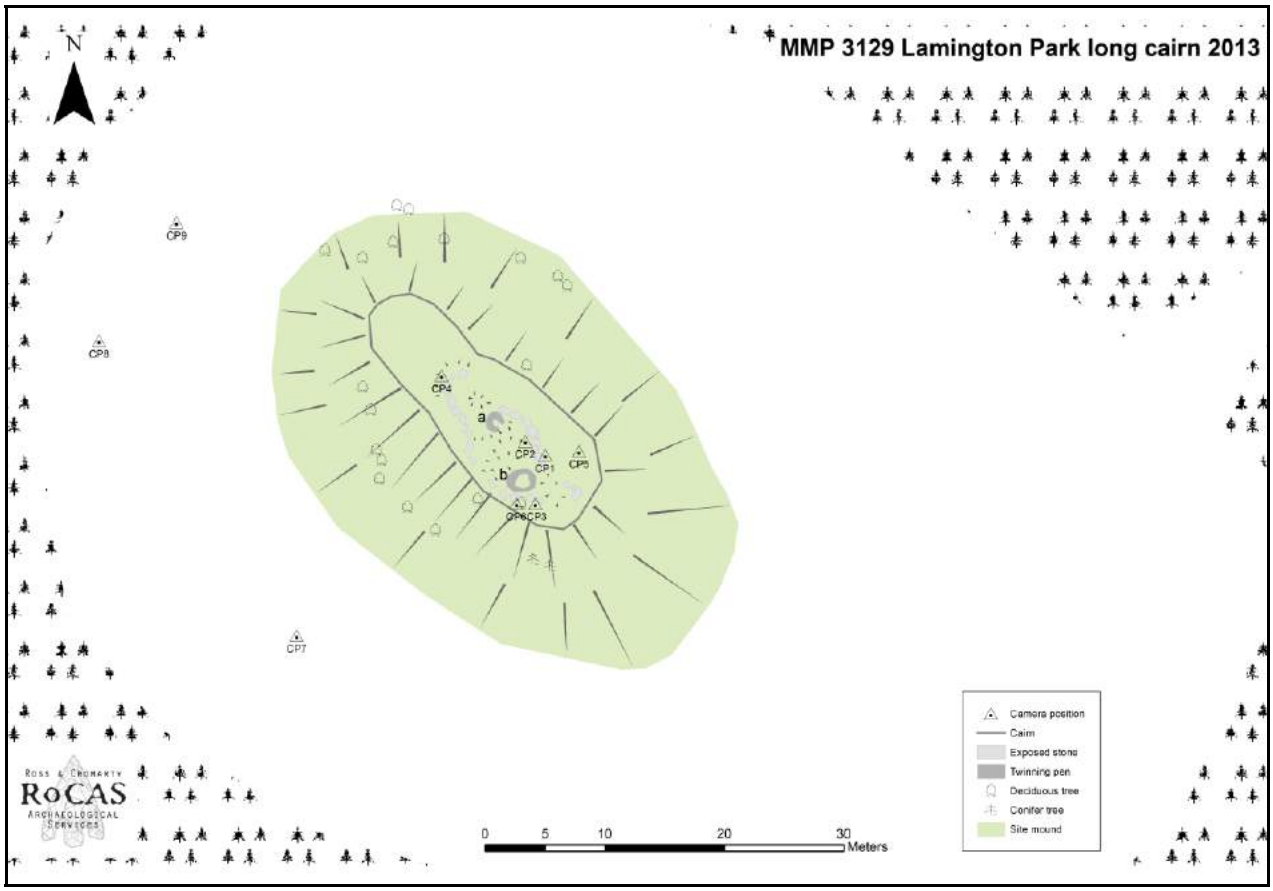
*General view along the spine of the cairn, facing NW (CP3), showing twinning pen **b***

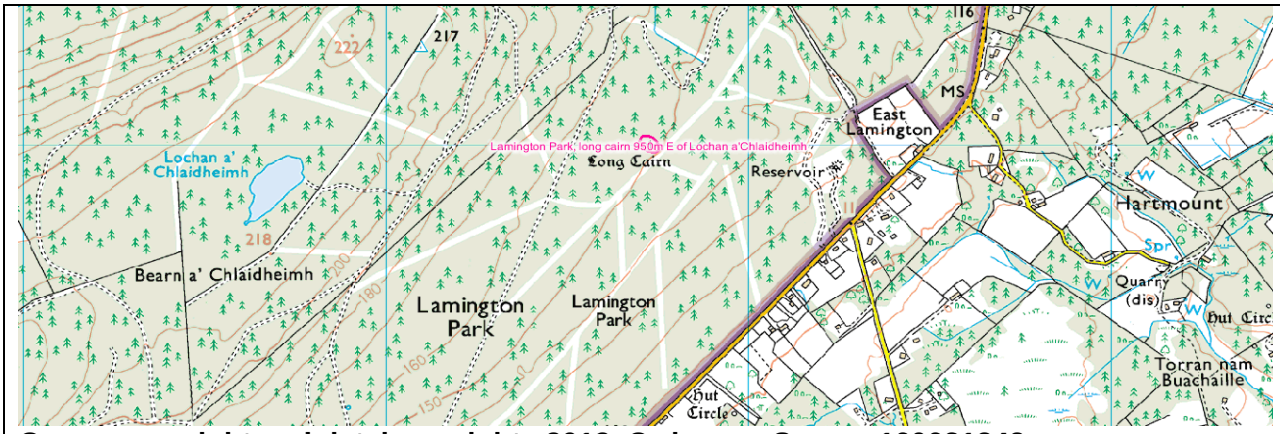
*Image showing twinning pen **b**, from the S (CP2), with encroaching vegetation*

[1] GENERAL DESCRIPTION

The monument, which is located on top of a natural glacial mound within a forest plantation, comprises a long cairn approximately 30m long by 15m wide with a height of around 3m. There are no indications of chambers or other structures so the site may be relatively undisturbed.

Chambered tombs are large structures for communal burial, dating from the Neolithic period (c. 4,400 BC – 2,900 BC). Most would have originally consisted of a burial chamber and entrance passage covered by an earthen barrow or stone cairn. Chambered tombs were built and used by local communities over long periods of time. There appear to be many regional traditions and variations in shape and construction. Chambered tombs of this type are found throughout Scotland, with a marked concentration in Caithness and Sutherland. Excavated examples often show long sequences of construction and re-use. A typical long cairn contains at least one simple megalithic chamber and often a horned façade (although the chambers need not be accessed from a passage central to the façade). A long cairn can be a complex construction, sometimes incorporating a number of earlier round cairns.





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The monument has significant archaeological potential to enhance our knowledge of prehistoric ritual and burial rites, social organisation and the environment. The scheduled area is an oval 60m NW-SE by 40m SW-NE, and includes the cairn and an area around it in which evidence relating to its construction and use may survive.

[2] HISTORIC SCOTLANDMONUMENT WARDEN REPORT(S)

Date of visit	Site Condition Score	Deterioration Risk Score	Historic Scotland Priority Index
05/03/2008	2	1	2.2

[3] OBJECTIVES OF MANAGEMENT

Objective	***General aims and objectives***
CONSERVATION	The main objective of management is to ensure the stable condition of the monument and to ensure that the monuments and their surrounding areas are kept free of trees and scrub, thereby preserving both the archaeological remains and their setting.
ACCESS	There is reasonably good access to the site from the adjacent forestry tracks on foot, although access to the monument from the track is over rough and tussocky ground.
INTERPRETATION	No interpretation panel is currently planned for this site.
SETTING	The site is located within a clearing in mature forestry plantations on the SE-facing slopes of Bearn a' Chladheimh.

[4] ISSUES REQUIRING ATTENTION: POTENTIAL OR EXISTING THREATS

CONDITION OF MONUMENT

This well-preserved long cairn is located within a clearing in mature conifer plantations on the SE facing slopes of Bearn a' Chlaidheimh, to the NW of East Lamington in the Scotsburn Wood. Before the conifer plantation was established around the cairn, the monument would have had extensive views over Nigg Bay and the coastal plain running down the NW side of the Moray Firth.

The long cairn, which has been built on a glacial knoll, is aligned NW-SE and measures 32.0m long by 16.0m wide and stands to a maximum height of 3.5m. The knoll accentuates the height of the monument, which would have been visible has an imposing structure on the NE shoulder of Bearn a' Chlaidheimh. The cairn and underlying mound are covered in thick stands of heather, while other vegetation types on the monument include bracken, juniper, bilberry and moss. Evidence for the felling of trees surrounding the site was identified during the visit, which has provided a clearing in which the structure stands. However, there are a significant number of self-set trees on and surrounding the site including conifer and birch. Some of these trees are now becoming well-established. The ground vegetation, in particular the heather and bracken, and the underlying tussocky ground which includes earlier forestry ploughing, makes the monument difficult to access, although forest tracks pass close to the site.

The SW side of the cairn exhibits a uniform slope, while the NE side is more gently sloped with two distinct breaks of slope. Both the NW and SE ends of the cairn are slightly splayed and these features may be all that remains of horn-works of cairn facades. In particular, the NW end of the cairn displays a level terrace which may form a part of a façade at this end of the monument, or may simply be the result of removal of stone in this area.

Some exposed moss-covered stone and boulders are visible towards the summit of the monument, especially at the centre and SE end of the cairn, while stone towards the base of the structure is covered in ground vegetation and encroaching turf. The exposed stone has several shallow hollows. Two stone-built sub-circular structures (**a** and **b**) were recorded built into the cairn structure, which may be the remains of twinning pens – relating to later agricultural use of the site. Structure **a** is open-ended to the SE and measures 2.8m NE-SE by 2.4m NW-SE over walls 0.6m wide and standing up to 0.5m high. Structure **b** measures 3.5m ENE-WSW by 2.6m side over walls up to 0.7m wide and standing up to 0.6m high. Both structures have stone and boulder-covered interiors, resulting from the structures being built into the top of the cairn material. Otherwise, the cairn has not witnessed significant robbing of material as found at other sites, most likely due to its relatively isolated location on the hill slopes.

Issue	***General descriptions with specific details***
FOREST OPERATIONS (*if appropriate*)	All forestry operations in the surrounding area will be planned and organised to avoid any damage to the monument in the course of harvesting and timber extraction. No replanting will take place within the scheduled area.
BUFFER ZONE	An unplanted buffer zone of 20m will be retained around the scheduled area.
VEGETATION / NATURAL REGENERATION	Natural regeneration of conifer and birch trees is especially pronounced around the base of the cairn and natural knoll, while several trees were noted growing on the monument. Thick stands of heather and bilberry are growing on and around the monument, while some stands of bracken are also present.

PUBLIC AND OTHER ACCESS	The Scottish Outdoor Access Code ensures the public right to responsible access.

[5] SPECIFIC WORK PROPOSED IN THE PLAN PERIOD

The following operations are proposed within the Plan Period:

Detail of work	Detail of time / condition of response
Monitor the condition of the monument and ensure the removal of all intrusive scrub vegetation and regeneration.	If required, clearance will occur at least once every five years and will be undertaken by Forest District staff or contractors. All scrub vegetation, bracken and naturally regenerating trees on and around the upstanding structures will be cut off at ground level using appropriate hand or power tools and removed. Where necessary the cut roots of invasive vegetation will be poisoned with an appropriate herbicide.
	No work will be undertaken in the scheduled area other than work previously agreed with Historic Scotland and detailed in this plan.

[6] ARRANGEMENTS FOR MONITORING

Type of monitoring	Detail of recording
FCS staff will formally inspect the condition of the monument once every five years and alongside the Historic Scotland Field Monument Warden during the next scheduled visit within the Historic Scotland Field Monument Warden programme.	The Forest District will record when any major management action (described within this plan) was undertaken (i.e. year action undertaken) within the Designated Historic Assets Register.

AGREEMENT TO THE PLAN

This is an agreement under section 17 of the Ancient Monuments and Archaeological Areas Act 1979. Only works which are carried out in fulfilment of the Occupier's obligations and which are specifically identified in this Agreement are deemed to have been granted Scheduled Monument Consent under the Ancient Monuments Class Consents Order *(Scotland)* 1996. The Occupier must apply for the Consent of the Scottish Ministers prior to undertaking any further works affecting the Area.

Signed on behalf of Forestry Commission Scotland by: **FCS Archaeologist**
Date of signature:

Signed by Historic Scotland on behalf of the Scottish Ministers by:
Date of signature:

Lamington Park long cairn (August 2012 photographic record)

No.	Direction Facing	Camera position	Notes	Taken By	Date
1	SW	CP1	Twinning pen b in top of cairn structure	LF	31/07/2012
2	S	CP2	Twinning pen b in top of cairn structure	LF	31/07/2012
3	NW	CP3	Twinning pen b and exposed cairn material	LF	31/07/2012
4	SE	CP4	Exposed cairn material and twinning pen a by scale	LF	31/07/2012
5	W	CP5	Exposed cairn material and twinning pen b by scale	LF	31/07/2012
6	N	CP6	Top of cairn showing self-set birch tree and bracken	LF	31/07/2012
7	NE	CP7	General view of SW flanks of monument	LF	31/07/2012
8	N	CP7	General view of SW flanks of monument	LF	31/07/2012
9	E	CP8	General view of flanks of monument	LF	31/07/2012
10	ESE	CP9	View of NW end of monument showing vegetation	LF	31/07/2012

Forestry Commission Scotland

Monument:	**Red Burn, chambered cairn 500m S of Redburn Cottage**
SM ref:	**2395**
Forest District:	**North Highland**
Plan start:	**01/04/10**
Plan finish:	**31/03/15**
MMP class:	
Grid ref:	**NH727834**
National Monuments Record Number:	**NH78SW 5**
FC ref:	**2395**
Compartment:	**117**
HS Casework area:	**North West Team**
MMP prepared by:	**Malcolm Macdougall**
Site visit: (Date)	**09/03/10**
(Attendees)	**Anne Coombs/Peter MacKay**

View facing West and date West 09/03/10.

HS WARDEN SKETCH SHEET

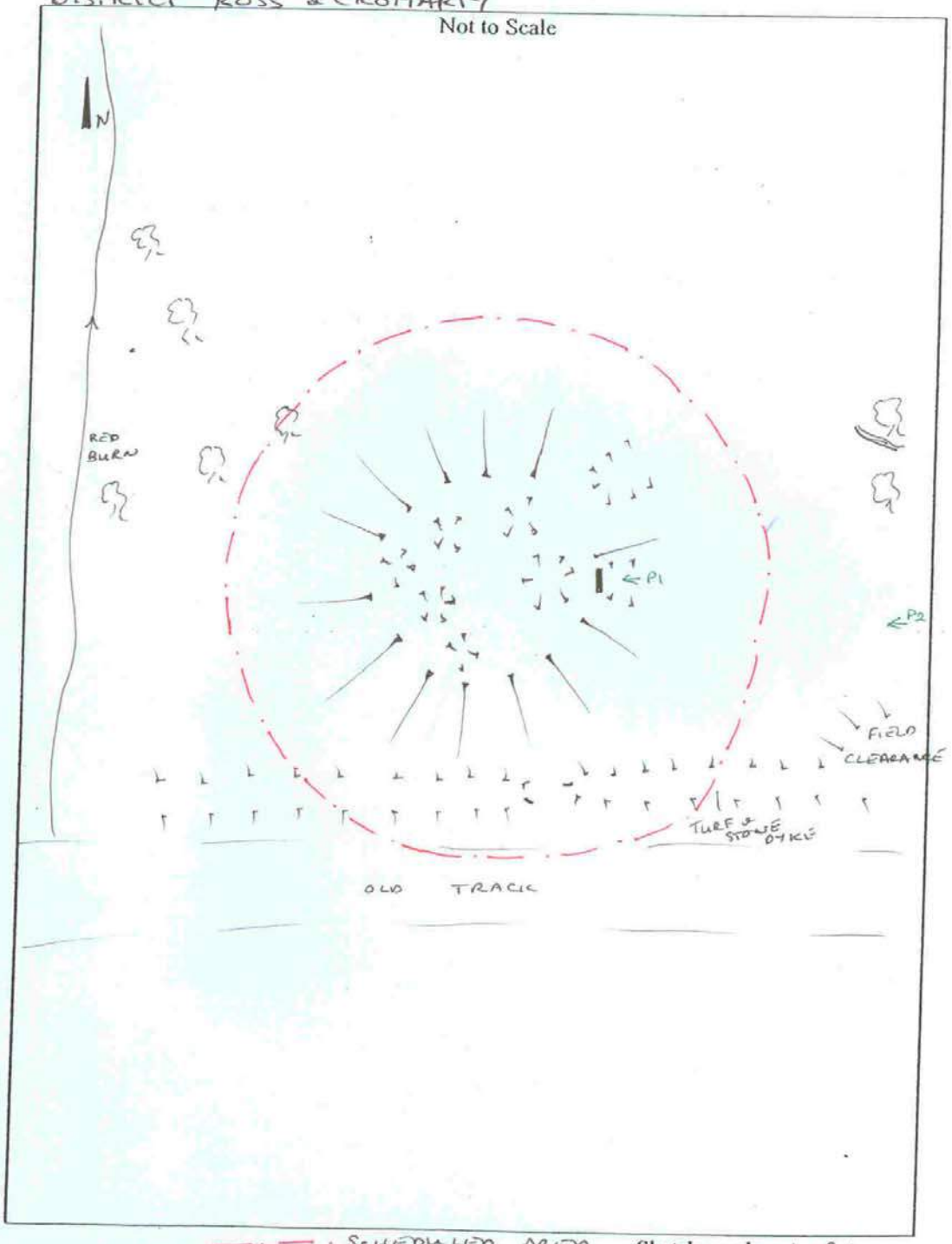
Index No 2395

Monument RED BURN, chambered cairn 500m S of Redburn Cottage

Council Area HIGHLAND Initials of MW A C Date of Visit 09.03.2018 Visit No 06

DISTRICT ROSS & CROMARTY

Not to Scale



SCHEDULED AREA

Sketch number 1 of 1

[1] GENERAL DESCRIPTION

The monument comprises the remains of a chambered cairn of the “Orkney/Cromarty” type, characteristic of the Neolithic period (c. 4000-2000 BC). Cairns of this type were used as funerary structures. They contained stone-lined chambers in which the remains of the dead were placed. These monuments usually contained several burials, and some show long sequences of construction and reuse. At this site, a cist containing an urn was discovered in 1824.

The cairn lies on a terrace above the Red Burn at around 125m OD. It is well preserved, standing to a height of approximately 4 m, and is round, with a diameter of approximately 22 m, although it may originally have been even larger. Three thin slabs exposed on the N side are probably part of the peristalith, or kerb, defining the edge of the cairn. Part of the chamber is exposed as 3 slabs set on edge. The chamber measures about 1.5 m in width.

The scheduled area comprises the remains described above an area around them within which related material may be expected to survive. It is circular with a diameter of 45 m, as marked on the Scheduling Certificate (Appendix III). The elements, which comprise the modern field boundary running across the southern section of the scheduled area, are specifically excluded from the scheduling.

[2] HISTORIC SCOTLAND MONUMENT WARDEN REPORT(S)

Date of visit	Site Condition Score	Deterioration Risk Score	Historic Scotland Priority Index
09/03/10	2	1	2.24

[3] OBJECTIVES OF MANAGEMENT

Objective	***General aims and objectives***
CONSERVATION	To preserve and prevent damage occurring to the scheduled monument.
ACCESS	Access to the site will be maintained using the existing forest ride network.
INTERPRETATION	Interpretation is not being considered for this site within the plan period.
SETTING	The site lies within a large opening in the forest with views over the Dornoch Firth.

[4] ISSUES REQUIRING ATTENTION: POTENTIAL OR EXISTING THREATS

Issue	***General descriptions with specific details***
CONDITION OF MONUMENT	09-MAR-2010, AC The site lies on the N facing slope of Cnoc an t¿Sabhail overlooking the Dornoch Firth and immediately to the E of Red Burn and on the W

	edge of Morangie Forest conifer plantation. The monument, a chambered cairn lies to the S of an old track between Edderton and Tain and an old stone dyke lies immediately to the N of the cairn. The cairn is c.22m in diameter and c.4m high and the lower edges of the cairn are grass covered. There are several scoops within the cairn stone and a lintel of the possible E facing entrance or part of a cist has been exposed and was visible on this visit as the vegetation was very low. There is a sub-rectangular scoop on the NE arc which may indicate that a later building was built into the base of the cairn. There are a number of large field clearance cairns along the edge of the old track. These date from World War 2 when the field to the N was cleared for cultivation. There are some small scrubby broom and rose bushes on the cairn, these do not seem to be increasing in size. The mature trees to the E of the cairn seem reasonably stable at present and as noted on the previous visit they do not seem likely to be a problem. Ideally the recently planted deciduous trees on the NW edge of the scheduled area will be removed in the near future.
FOREST OPERATIONS (if appropriate)	The date of harvesting surrounding area is estimated to be **2030**. The work will be planned and organised to avoid any damage to the monument in the course of harvesting and timber extraction. No replanting will take place within the scheduled area.
BUFFER ZONE	A buffer zone is considered inappropriate in this case as the scheduled area already defines a large open space.
VEGETATION / NATURAL REGENERATION	Vegetation will be cut and removed from the scheduled area as and when required.
PUBLIC AND OTHER ACCESS	The Scottish Outdoor Access Code ensures the public right to responsible access.
WATERCOURSE MANAGEMENT	NA
etc	

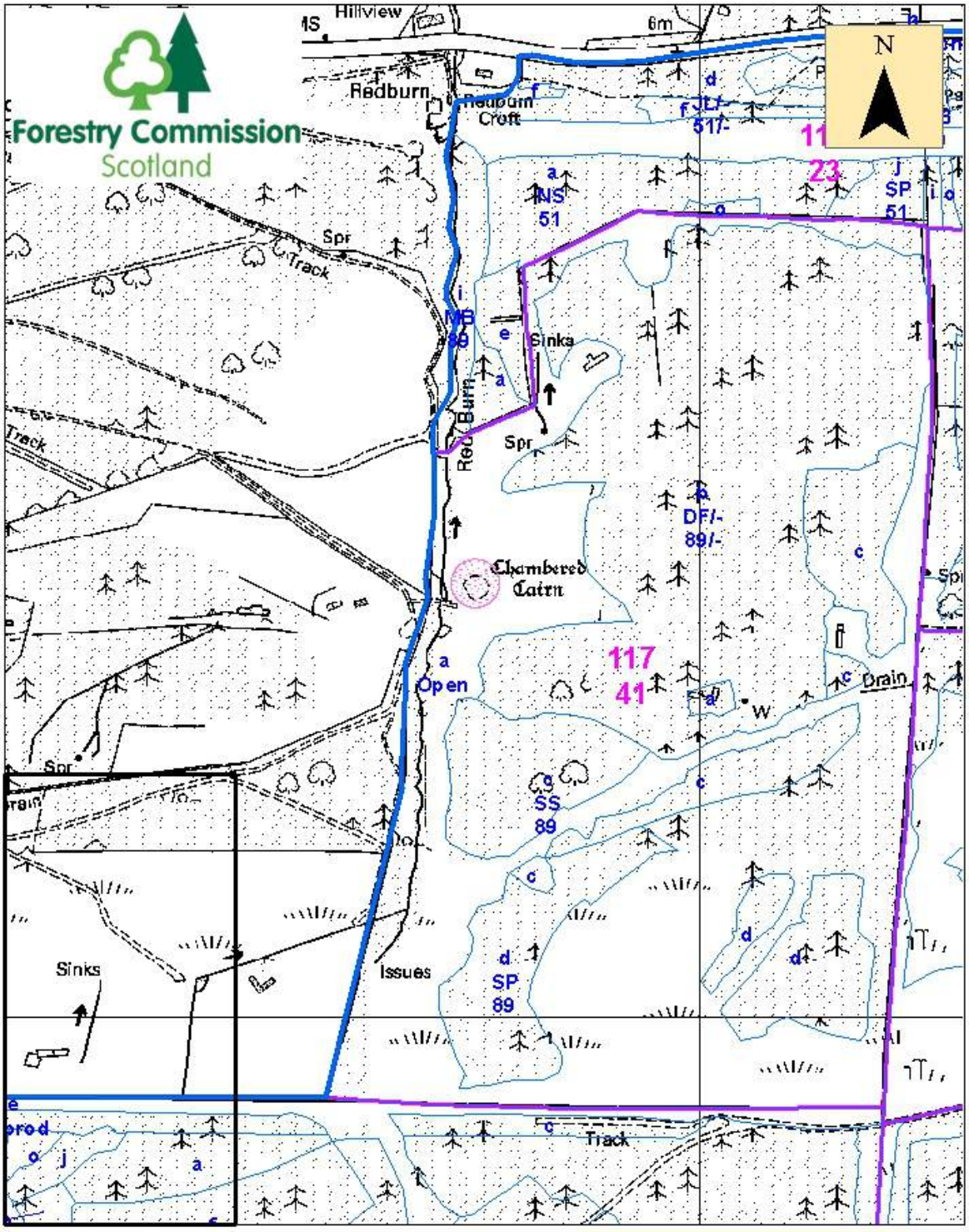
[5] SPECIFIC WORK PROPOSED IN THE PLAN PERIOD

The following operations are proposed within the Plan Period:

Detail of work	**Detail of time / condition of response**
Cut vegetation.	Vegetation will be cut as and when required. This will involve manually cutting the stems at ground level and removing the materials from the scheduled area.

[6] ARRANGEMENTS FOR MONITORING

Type of monitoring	**Detail of recording**
Site will be visited annually by FCS staff.	Vegetation which is likely to have a detrimental effect on the site will be recorded and included in the work programme for removal within one year.



SAM 2395

Sub-compartments
archaeology_area
Management Area
Compartments

North Highland FD
Date: 1st April 2010

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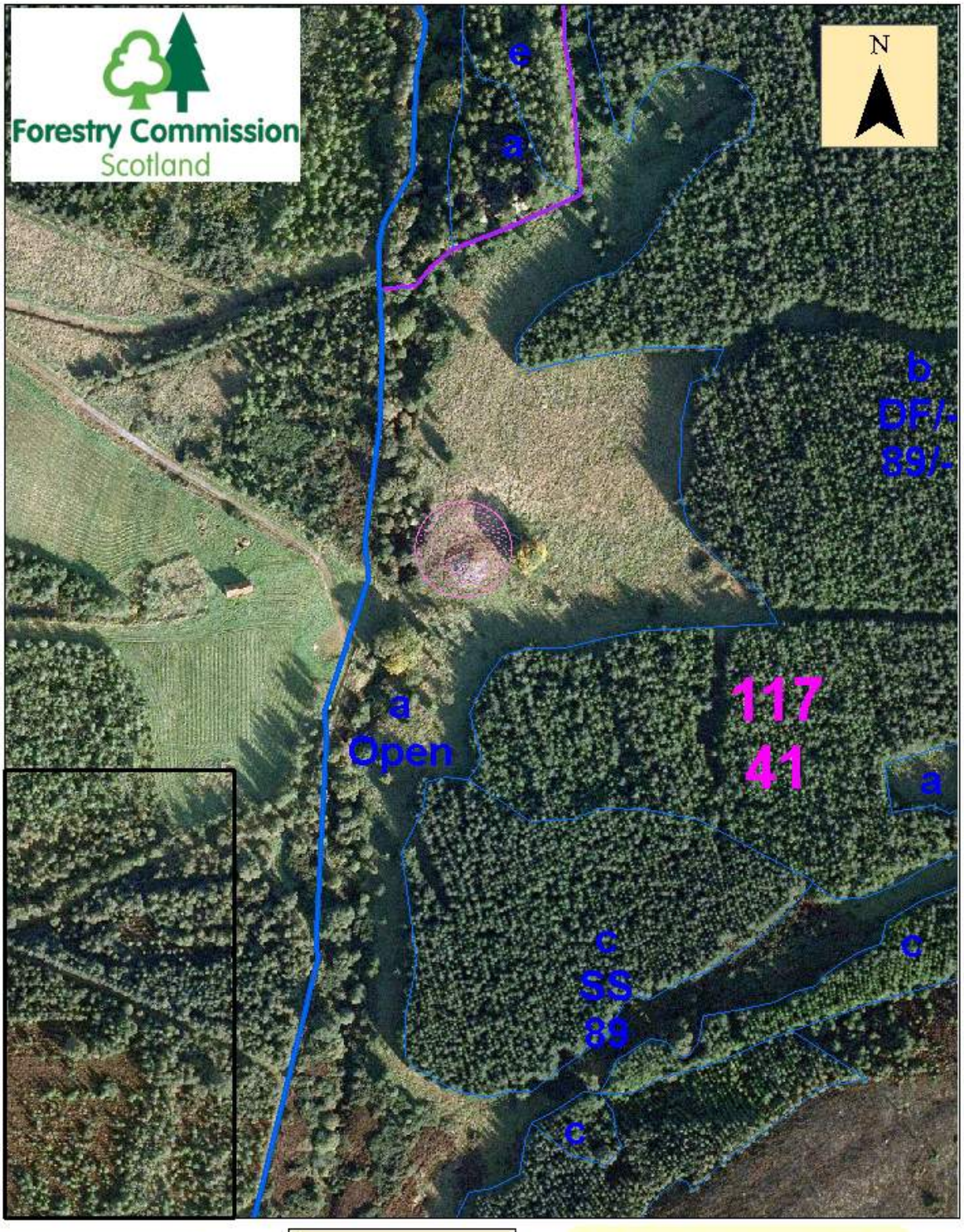
1:5,000



SAM 2395

Sub-compartments
archaeology_area
Management Area
Compartments

North Highland FD
Date: 1st April 2010

0 12.5 25 50 75 100 Meters

1:2,500

AGREEMENT TO THE PLAN

This is an agreement under section 17 of the Ancient Monuments and Archaeological Areas Act 1979. Only works which are carried out in fulfilment of the Occupier's obligations and which are specifically identified in this Agreement are deemed to have been granted Scheduled Monument Consent under the Ancient Monuments Class Consents Order *(Scotland)* 1996. The Occupier must apply for the Consent of the Scottish Ministers prior to undertaking any further works affecting the Area.

Signed on behalf of Forestry Commission
by:
Date of signature:

Signed by Historic Scotland on behalf of the
Scottish Ministers by:
Date of signature:

Monument: Redburn Cottage, long cairn 880m SE of

SM ref: 4763

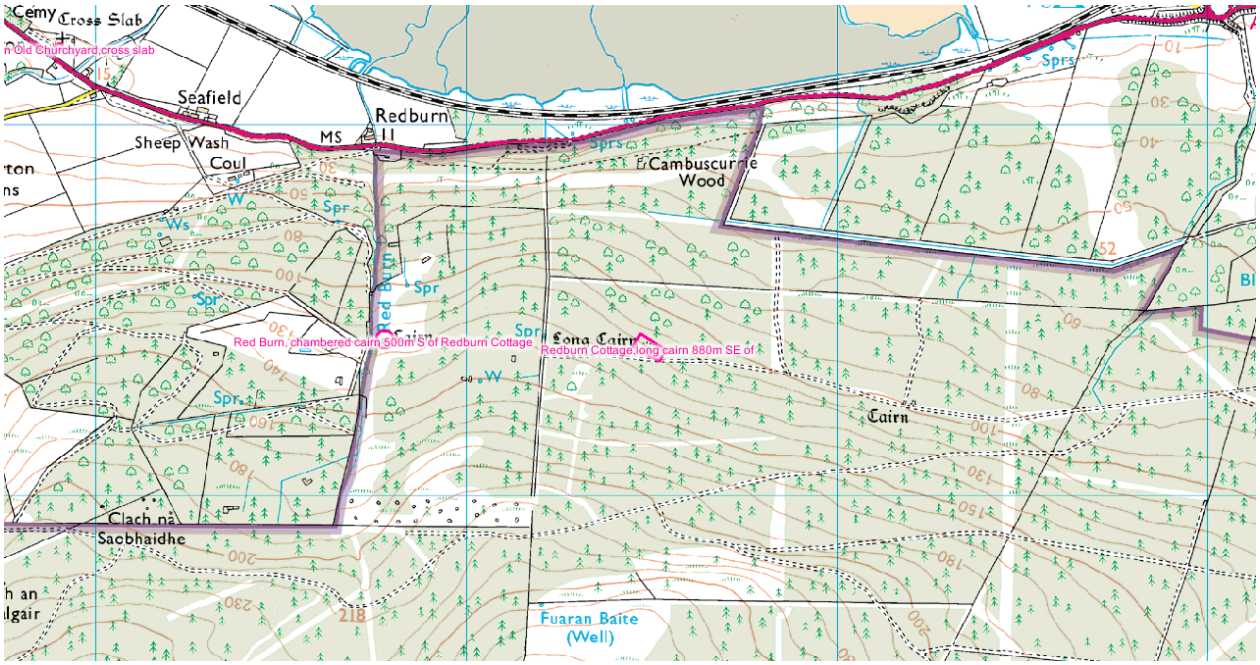
Forest District:	**North Highland**
Plan start:	**01/04/2013**
Plan finish:	**31/03/2023**
MMP class:	**2**
Grid ref:	**NH 734 834**
NMRS Number:	**NH78SW14**
HS Casework area:	**N**
MMP prepared by:	**M Ritchie**
Site visit: (Date)	**28th January 2013**
(Attendees)	

View facing N (2013)

[1] GENERAL DESCRIPTION

In 1971 the Ordnance Survey noted “A long cairn measuring 61m from ESE to WNW by 14m in width at the E end and 10m in width at the W end. The cairn material has been subject to robbing and other disturbance but there is no sign of a chamber. About two thirds along its length from the E end is a 2m gap in the debris which may be original but is more likely modern, possibly where a track has cut it.”

Chambered tombs are large structures for communal burial, dating from the Neolithic period (c. 4,400 BC – 2,900 BC). Most would have originally consisted of a burial chamber and entrance passage covered by an earthen barrow or stone cairn. Chambered tombs were built and used by local communities over long periods of time. There appear to be many regional traditions and variations in shape and construction. Chambered tombs of this type are found throughout Scotland, with a marked concentration in Caithness and Sutherland. The monument has significant archaeological potential to enhance our knowledge of prehistoric ritual and burial rites, social organisation and the environment.



Crown copyright and database rights 2012. Ordnance Survey 100021242

The area to be scheduled measures 80m ESE – WNW by 35m to include the cairn and an area around it in which traces of activities associated with its use will survive.

[2] HISTORIC SCOTLANDMONUMENT WARDEN REPORT(S)

Date of visit	Site Condition Score	Deterioration Risk Score	Historic Scotland Priority Index
30/11/2005	3	2	3.6

[3] OBJECTIVES OF MANAGEMENT

Objective	***General aims and objectives***
CONSERVATION	The main objective of management is to ensure the stable condition of the monument and to ensure that the monuments and their surrounding areas are kept free of trees and scrub, thereby preserving both the archaeological remains and their setting.
ACCESS	There is good access to the site from the adjacent forestry tracks on foot.
INTERPRETATION	No interpretation is currently planned for this site.
SETTING	The site is situated in an open clearing.

[4] ISSUES REQUIRING ATTENTION: POTENTIAL OR EXISTING THREATS

CONDITION OF MONUMENT

Historic Scotland Monument Warden report (30/11/05):

The site was revisited as more damage has been observed during its annual monitoring. The `scoop' excavated immediately prior to the previous visit (15-JUL-2003) has been increased in size. Again no new archaeology has been exposed but the stones have been moved to create a scoop over 1m in depth. The site has bracken and a little regen growing on the cairn stone and several young trees along the edge of the plantation. It is intended to remove all these trees and a further 2 rows of plantation trees to ensure that the 20m buffer zone is in place on the N, E and W of the site. The S of the site abuts the forestry track and this is presently lined with whin bushes; these will also be removed. The site will continue to be monitored for regen and appropriate action taken; the bracken will be re-sprayed. The continued damage is a cause for concern and a Historic Scotland sign will be placed on the trackside to the E of the site to try to discourage the continued movement of stones and the site will be regularly monitored.

Issue	***General descriptions with specific details***
FOREST OPERATIONS (*if appropriate*)	All forestry operations in the surrounding area will be planned and organised to avoid any damage to the monument in the course of harvesting and timber extraction. No replanting will take place within the scheduled area.
BUFFER ZONE	An unplanted buffer zone of 20m will be retained around the scheduled area.
VEGETATION / NATURAL REGENERATION	Natural regeneration of trees and other ground vegetation, including gorse and broom; while grass and bracken also obscure the monument.
PUBLIC AND OTHER ACCESS	The Scottish Outdoor Access Code ensures the public right to responsible access.

[5] SPECIFIC WORK PROPOSED IN THE PLAN PERIOD

The following operations are proposed within the Plan Period:

Detail of work	Detail of time / condition of response
Monitor the condition of the monument and ensure the removal of all intrusive scrub vegetation and regeneration.	If required, clearance will occur at least once every five years and will be undertaken by Forest District staff or contractors. All scrub vegetation, bracken and naturally regenerating trees on and around the upstanding structures will be cut off at ground level using appropriate hand or power tools and removed. Where necessary the cut roots of invasive vegetation will be poisoned with an appropriate herbicide.
	No work will be undertaken in the scheduled area other than work previously agreed with Historic Scotland and detailed in this plan.

[6] ARRANGEMENTS FOR MONITORING

Type of monitoring	Detail of recording
FCS staff will formally inspect the condition of the monument once every five years and alongside the Historic Scotland Field Monument Warden during the next scheduled visit within the Historic Scotland Field Monument Warden programme.	The Forest District will record when any major management action (described within this plan) was undertaken (i.e. year action undertaken) within the Designated Historic Assets Register.

AGREEMENT TO THE PLAN

This is an agreement under section 17 of the Ancient Monuments and Archaeological Areas Act 1979. Only works which are carried out in fulfilment of the Occupier's obligations and which are specifically identified in this Agreement are deemed to have been granted Scheduled Monument Consent under the Ancient Monuments Class Consents Order *(Scotland)* 1996. The Occupier must apply for the Consent of the Scottish Ministers prior to undertaking any further works affecting the Area.

Signed on behalf of Forestry Commission Scotland by: **FCS Archaeologist**
Date of signature:

Signed by Historic Scotland on behalf of the Scottish Ministers by:
Date of signature:

Forestry Commission Scotland

Monument:	**Scotsburn Wood, chambered cairn 550m NNE of Scotsburn House**
SM ref:	**2914**
Forest District:	**North Highland**
Plan start:	**01/04/10**
Plan finish:	**31/03/15**
MMP class:	
Grid ref:	**NH721767**
National Monuments Record Number:	**NH77NW 5**
FC ref:	**2914**
Compartment:	**85**
HS Casework area:	**North West Team**
MMP prepared by:	**Stephen Fraser**
Site visit: (Date)	**30/03/10**
(Attendees)	**Mrs A Coombs**

View Facing South West 30/03/10

HS WARDEN SKETCH SHEET

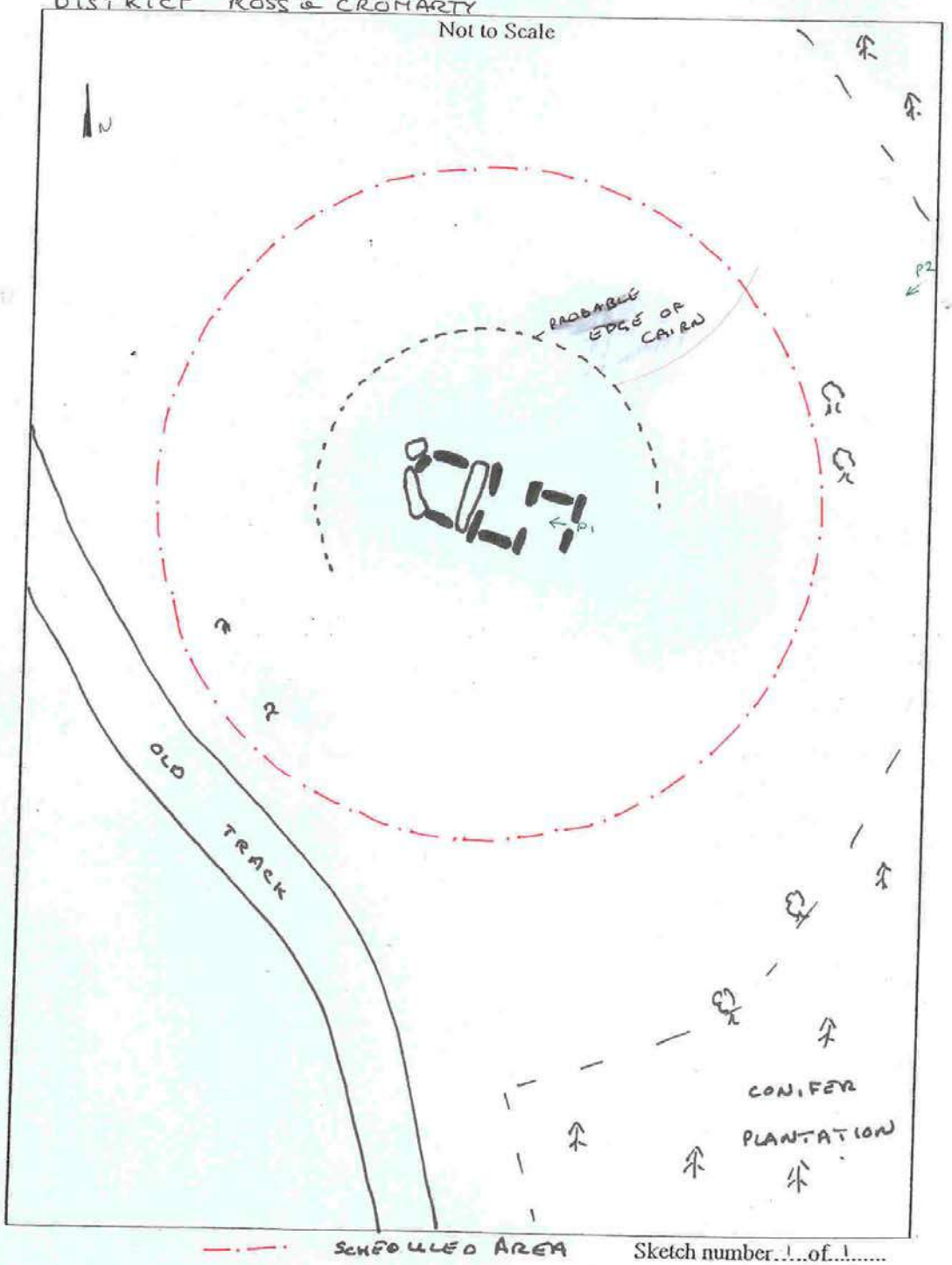
Index No 2914

Monument SCOTSBURN WOOD, chambered cairn 550m NNE of Scotsburn House

Council Area HIGHLAND Initials of MW A.C Date of Visit 30·03·10 Visit No 06

DISTRICT ROSS & CROMARTY

Not to Scale



Sketch number 1 of 1

[1] GENERAL DESCRIPTION

This chambered cairn is buried in the forestry and is very difficult to find, as all of the cairn material has been removed. All that survives are the side slabs to the chambers, but these are extremely difficult to interpret and plan in the present context. The whole area has been ploughed through, and a variety of trees are growing in the scheduled monument, including some deciduous trees.

[2] HISTORIC SCOTLAND MONUMENT WARDEN REPORT(S)

Date of visit	Site Condition Score	Deterioration Risk Score	Historic Scotland Priority Index
30/03/10	2	1	2.24

[3] OBJECTIVES OF MANAGEMENT

Objective	***General aims and objectives***
CONSERVATION	To ensure that the monument and its surrounding area are kept free of trees and scrub, thereby preserving both the archaeological remains and their setting.
ACCESS	Access to the site will not be improved during the plan period.
INTERPRETATION	There are no plans for interpretation on this site within the management plan period.
SETTING	There is no harvesting planned within the plan period or immediate vicinity. The setting will change during the plan period with the removal of mature conifers within 20m of the scheduled area.

[4] ISSUES REQUIRING ATTENTION: POTENTIAL OR EXISTING THREATS

Issue	***General descriptions with specific details***
CONDITION OF MONUMENT	The site lies within the Scotsburn Wood conifer plantation. The monument, a chambered cairn, lies to the E of an old track through the wood in an area of cleared ground. The cairn was originally c. 15m in diameter but the majority of the cairn stone has been removed in the past and the edge of the cairn is only visible as a scatter of stone. The chamber stones remain in place, there is a SE facing entrance and there are 2 compartments. The large slabs forming the compartments seem to be stable. The

	site was visited when there was still snow on the monument but it appears to be in a stable condition. There is still some bracken on the site and a little regen, ideally the bracken will be sprayed when appropriate and the regen removed. The birch trees near the edge of the scheduled area have not been removed in the past however experience suggests that birch regen has been a serious problem on similar sites so it would be appropriate to remove the trees before there is a problem. Where necessary the mature conifers within 20m of the scheduled area should also be removed to reduce the impact of regen in the future.
FOREST OPERATIONS (if appropriate)	The date of harvesting surrounding area is estimated to be **outside the plan period**. Any work will be planned and organised to avoid any damage to the monument in the course of later harvesting and timber extraction. No replanting will take place within the scheduled area.
BUFFER ZONE	A buffer zone of 20m considered appropriate in this case as the scheduled area is compromised by mature conifers of the 1st rotation.
VEGETATION / NATURAL REGENERATION	There are mature conifers, birch and bracken on the. The trees will be removed off site and the bracken sprayed when appropriate.
PUBLIC AND OTHER ACCESS	The Scottish Outdoor Access Code ensures the public right to responsible access.
WATERCOURSE MANAGEMENT	As per the current watercourse guidelines.

[5] SPECIFIC WORK PROPOSED IN THE PLAN PERIOD

The following operations are proposed within the Plan Period:

Detail of work	**Detail of time / condition of response**
Annual Vegetation monitoring & removal	Vegetation will be cut as and when required. This will involve manually cutting the stems at ground level or spraying and removing the materials from the scheduled area as appropriate.

[6] ARRANGEMENTS FOR MONITORING

Type of monitoring	Detail of recording
Visit Site annually, monitor & record vegetation and regen (especially bracken) levels that may damage the monument.	Record levels of vegetation and if necessary include removal in the work schedule for the coming year.

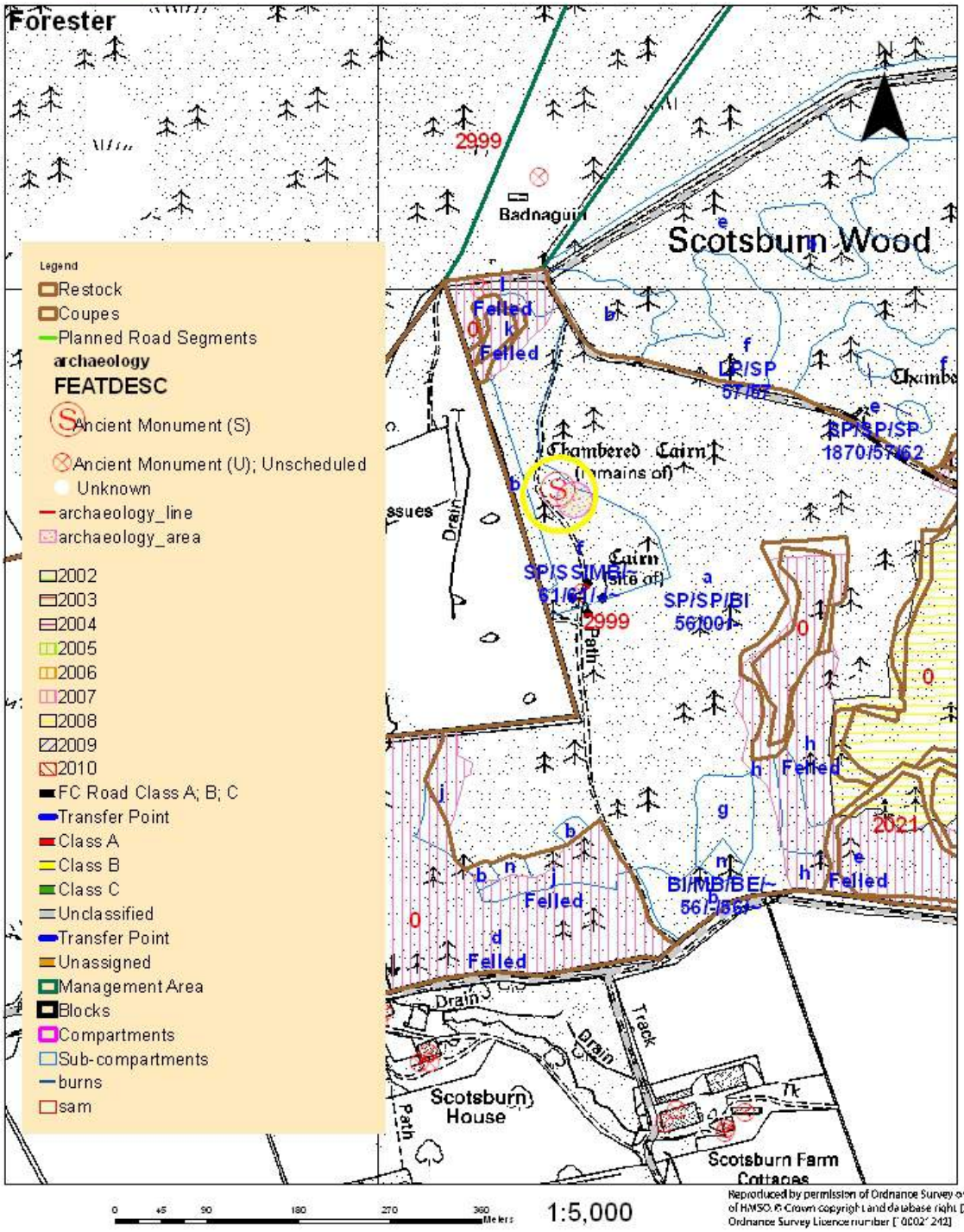
1:5000MAP

Forestry Commission Scotland

North Highland Forest District

SAM 2914

AUG 2010

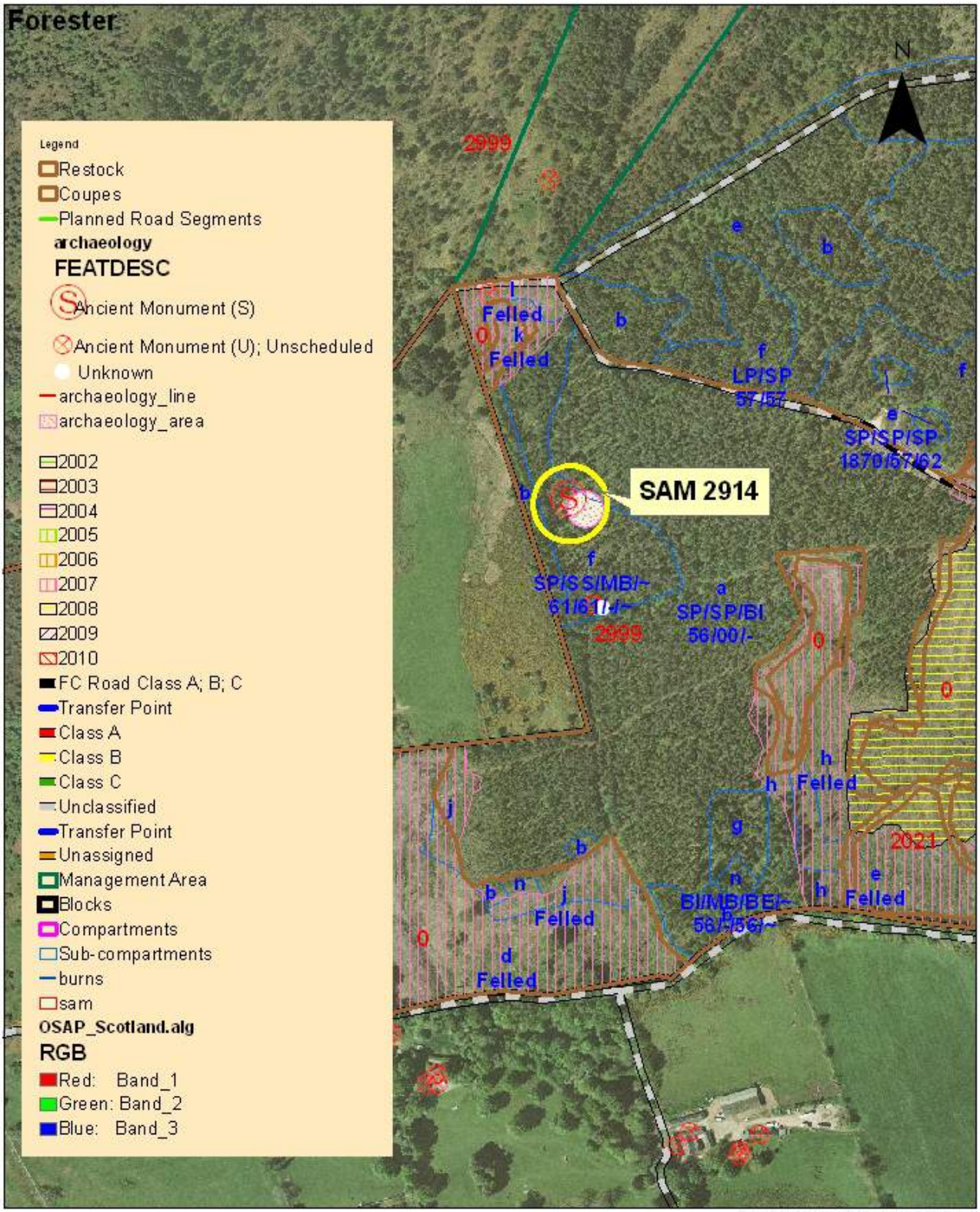


Forestry Commission Scotland

SAM 2914

North Highland Forest District

AUG 2010



AGREEMENT TO THE PLAN

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Signed on behalf of Forestry Commission
by:
Date of signature:

Signed by Historic Scotland on behalf of the
Scottish Ministers by:
Date of signature:

Monument:	**Scotsburn Wood,chambered cairn 820m NE of Scotsburn House**
SM ref:	**2915**
Forest District:	**North Highland**
Plan start:	**01/04/10**
Plan finish:	**31/03/15**
MMP class:	
Grid ref:	**NH726768**
National Monuments Record Number:	**NH77NW 5**
FC ref:	**2915**
Compartment:	**86**
HS Casework area:	**North West Team**
MMP prepared by:	**Stephen Fraser**
Site visit: (Date)	**30 MAR 2010**
(Attendees)	**Mrs A Coombs**

view facing North 30/03/10

HS WARDEN SKETCH SHEET

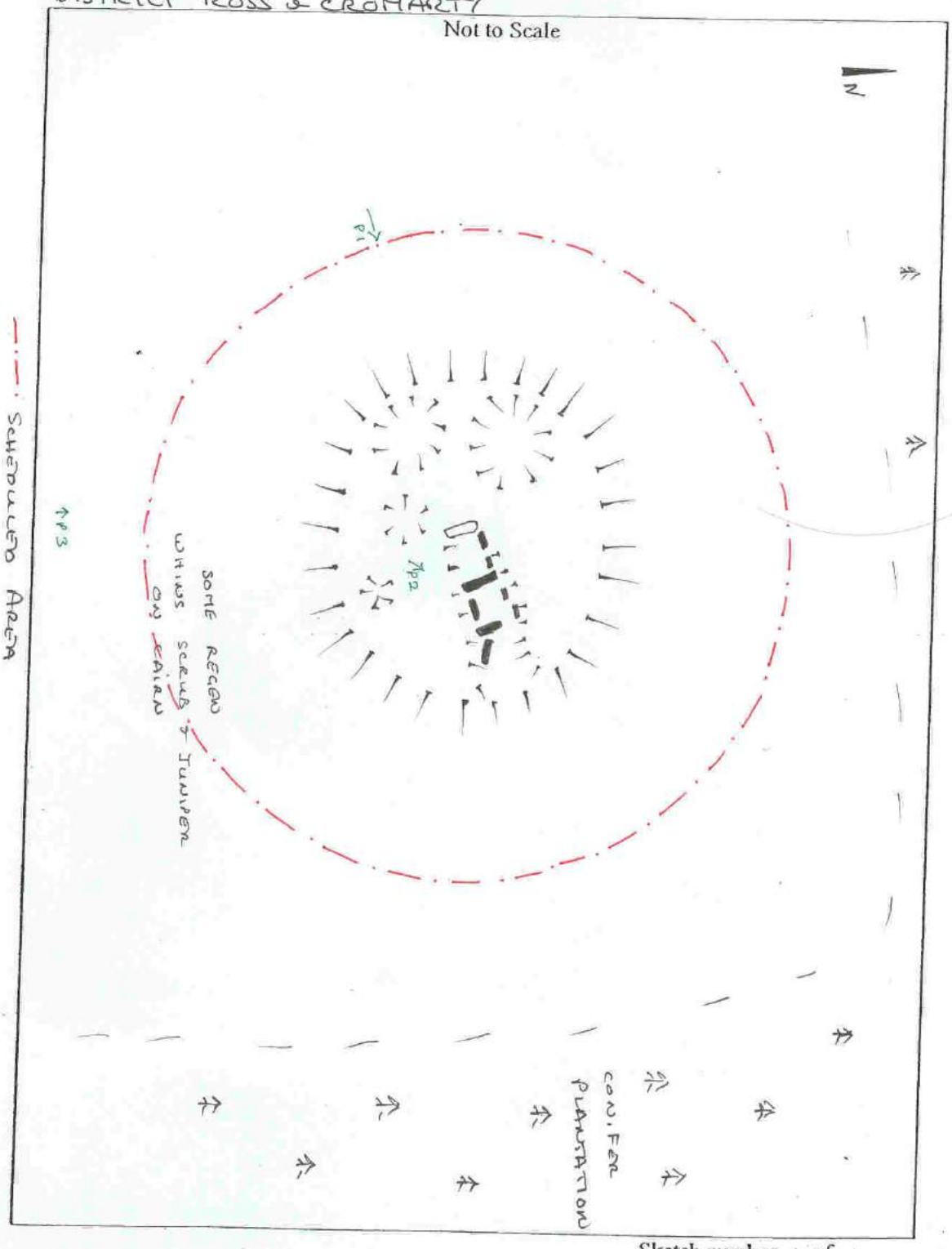
Index No 2915

Monument SCOTSBURN WOOD, chambered cairn 820m NE of Scotsburn House

Council Area HIGHLAND Initials of MW A .C Date of Visit 30·03·10 Visit No 06

DISTRICT ROSS & CROMARTY

Not to Scale



Sketch number 1 of 1

[1] GENERAL DESCRIPTION

The site lies within plantation. The monument, a chambered cairn, is as described in the previous reports, with the chamber exposed by past excavation. The cairn is c.14m in diameter. The cairn does not appear to have been ploughed or planted, but there is some growth of native trees on and around the monument. The birch tree referred to in the previous report has been cut, but is beginning to regenerate from the base. There are a number of small junipers on the edge of the cairn, as these are a protected species they will be left untreated. Any other regeneration of trees on the cairn will be monitored and removed. The surrounding trees are Scots Pine from the original plantation. The trees are well back from the scheduled area.

[2] HISTORIC SCOTLAND MONUMENT WARDEN REPORT(S)

Date of visit	Site Condition Score	Deterioration Risk Score	Historic Scotland Priority Index
30/03/10	2	1	2.24

[3] OBJECTIVES OF MANAGEMENT

Objective	***General aims and objectives***
CONSERVATION	To ensure that the monument and its surrounding area are kept free of trees and scrub, thereby preserving both the archaeological remains and their setting.
ACCESS	Access to the site will not be improved during the plan period.
INTERPRETATION	There are no plans for interpretation on this site within the management plan period.
SETTING	There is no harvesting planned within the plan period or immediate vicinity. The setting will not change during the plan period.

[4] ISSUES REQUIRING ATTENTION: POTENTIAL OR EXISTING THREATS

Issue	***General descriptions with specific details***
CONDITION OF MONUMENT	The site lies within the Scotsburn Wood conifer plantation. The monument, a chambered cairn, lies on a S facing slope above the forestry track in an area of cleared ground. The cairn is c. 14m in diameter and the cairn stone has been dug into in the distant past. The tops of the chamber stones are visible and there seems to be a WNW facing entrance. The site was visited when there was still snow on the monument but it appears to be in a stable condition. There is still a little regen which ideally will be removed and any

	bracken should be sprayed as appropriate. The juniper trees within the scheduled area will remain. Any birch trees within 20m of the scheduled area which have not been removed in the past ideally should be removed as experience suggests that birch regen has become a serious problem on similar sites.
FOREST OPERATIONS (if appropriate)	The date of harvesting surrounding area is estimated to be **outside the plan period**. No replanting will take place within the scheduled area.
BUFFER ZONE	A buffer zone is of 20m is considered appropriate in this case.
VEGETATION / NATURAL REGENERATION	There is mature birch and some bracken on the site. These trees will be removed off site and the bracken sprayed when appropriate. Juniper growing on site will not be removed.
PUBLIC AND OTHER ACCESS	The Scottish Outdoor Access Code ensures the public right to responsible access.
WATERCOURSE MANAGEMENT	Current watercourse guidelines apply.

[5] SPECIFIC WORK PROPOSED IN THE PLAN PERIOD

The following operations are proposed within the Plan Period:

Detail of work	**Detail of time / condition of response**
Annual Vegetation monitoring & removal	Vegetation will be cut as and when required. This will involve manually cutting the stems at ground level or spraying and removing the materials from the scheduled area as appropriate.

[6] ARRANGEMENTS FOR MONITORING

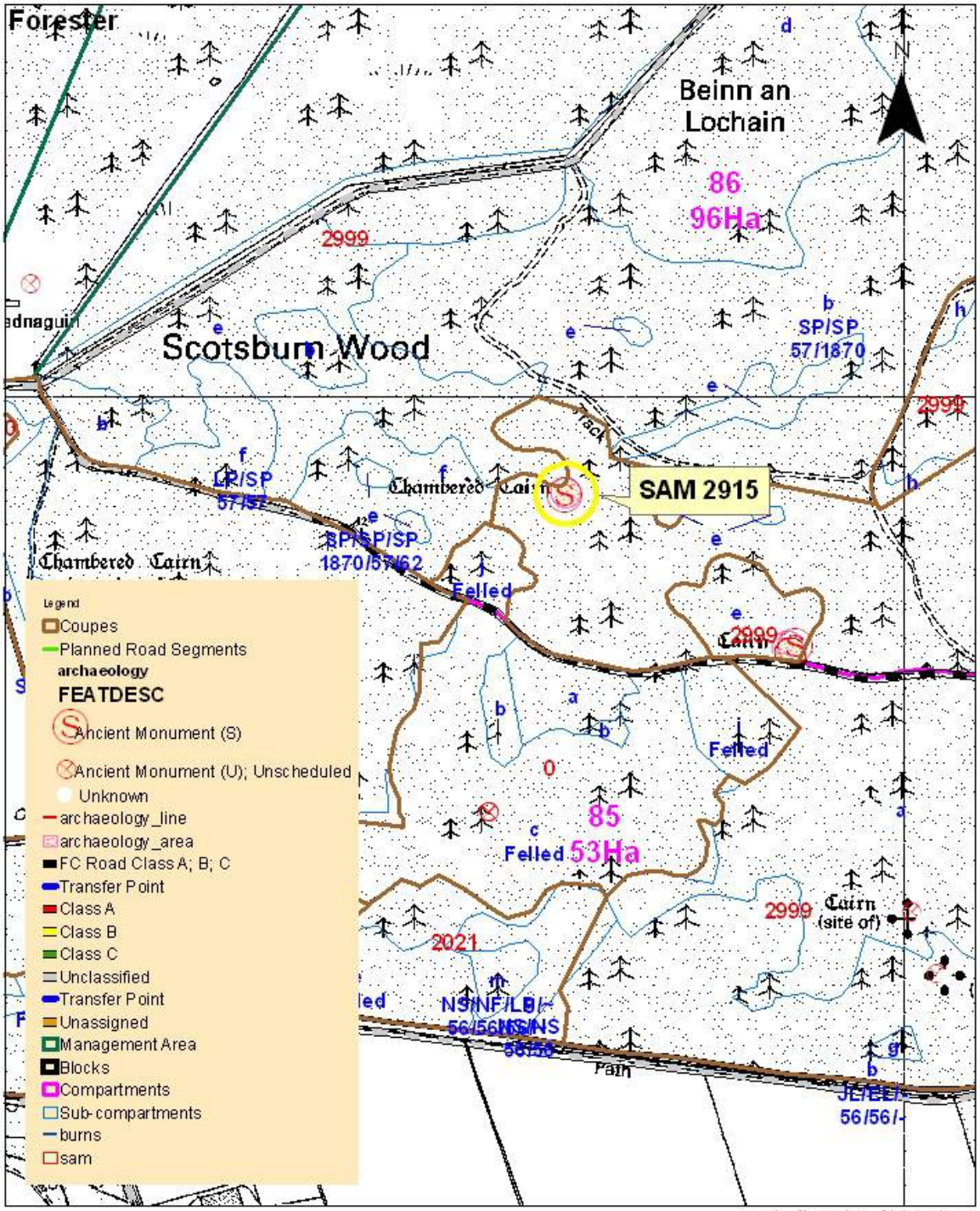
Type of monitoring	**Detail of recording**
Visit Site annually, monitor & record vegetation and regen (especially bracken) levels that may damage the monument.	Record levels of vegetation and if necessary include removal in the work schedule for the coming year.

Forestry Commission Scotland

North Highland Forest District

AUG 2010

SAM 2915



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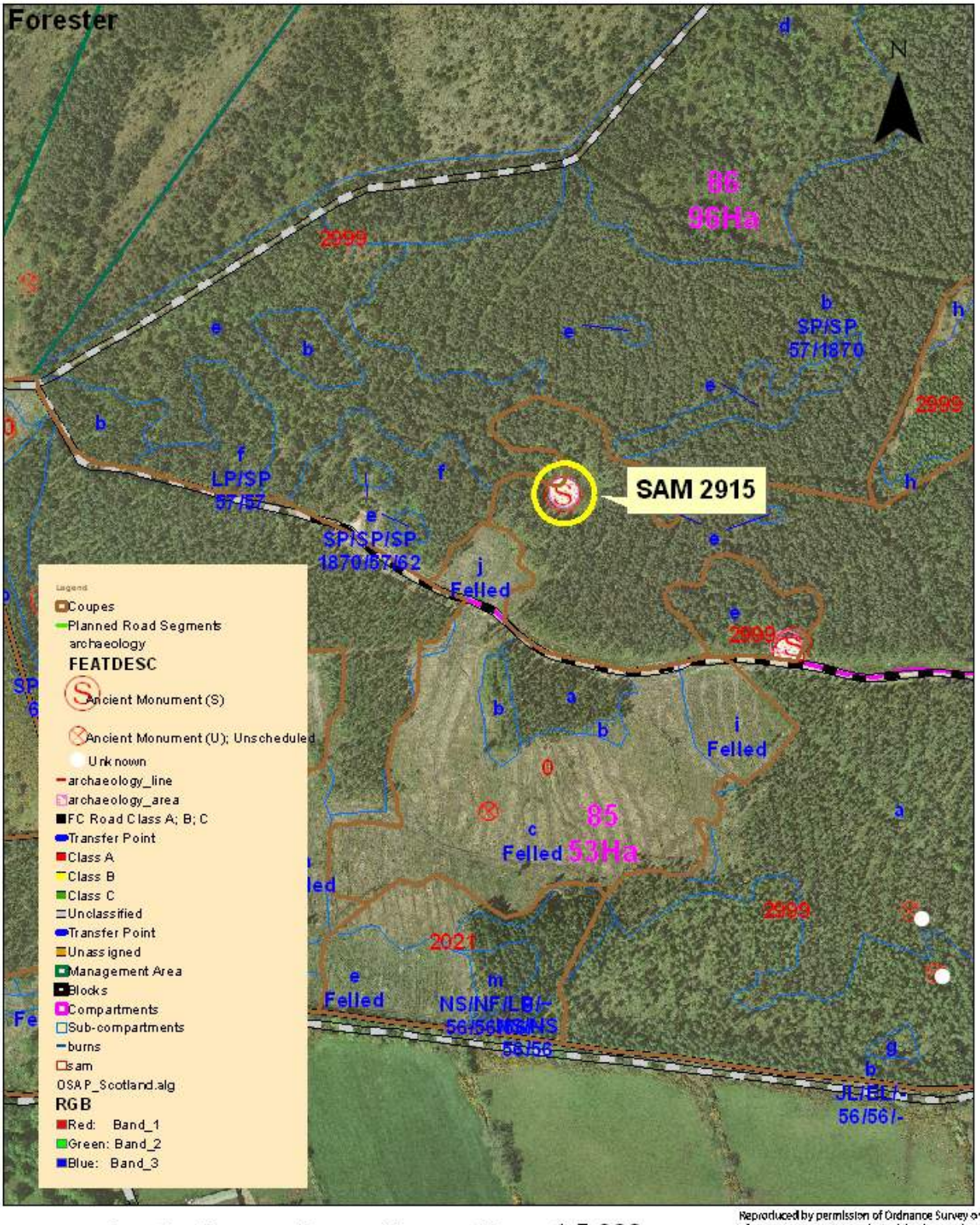
Forestry Commission Scotland

North Highland Forest District

AUG 2010

SAM 2915



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AGREEMENT TO THE PLAN

This is an agreement under section 17 of the Ancient Monuments and Archaeological Areas Act 1979. Only works which are carried out in fulfilment of the Occupier's obligations and which are specifically identified in this Agreement are deemed to have been granted Scheduled Monument Consent under the Ancient Monuments Class Consents Order *(Scotland)* 1996. The Occupier must apply for the Consent of the Scottish Ministers prior to undertaking any further works affecting the Area.

Signed on behalf of Forestry Commission
by:
Date of signature:

Signed by Historic Scotland on behalf of the
Scottish Ministers by:
Date of signature:

Monument: Scotsburn Wood, cairn 910m ENE of Scotsburn House

SM ref: 2916

Forest District:	**North Highlands**
Plan start:	**01/04/2013**
Plan finish:	**31/03/2018**
MMP class:	**1**
Grid ref:	**NH 728 767**
NMRS Number:	**NH77NW5**
HS Casework area:	**NW**
MMP prepared by:	**L Fraser**
Site visit: (Date)	**31st July 2012**
(Attendees)	**Steven Birch, Lynn Fraser**

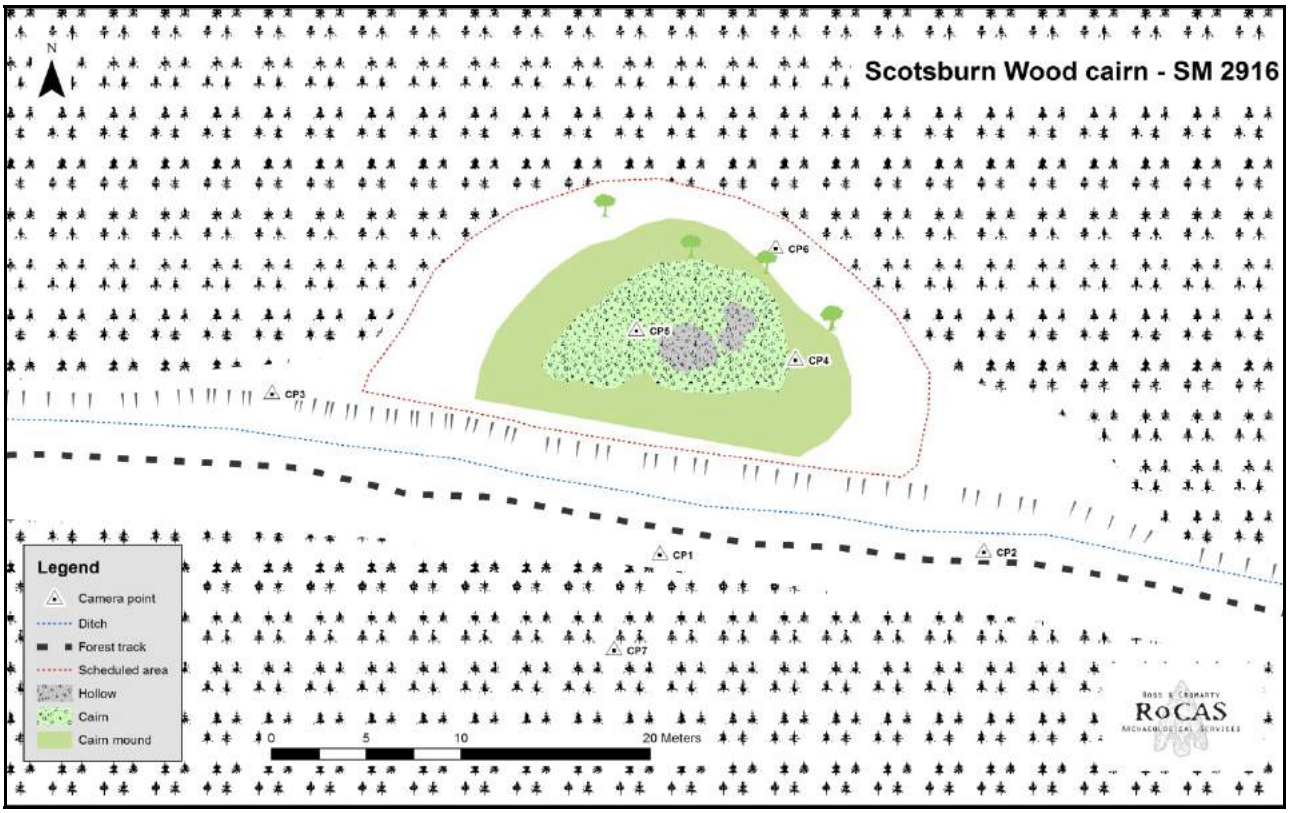
Cairn, facing N (CP1)

Possible chamber, facing W (CP 4)

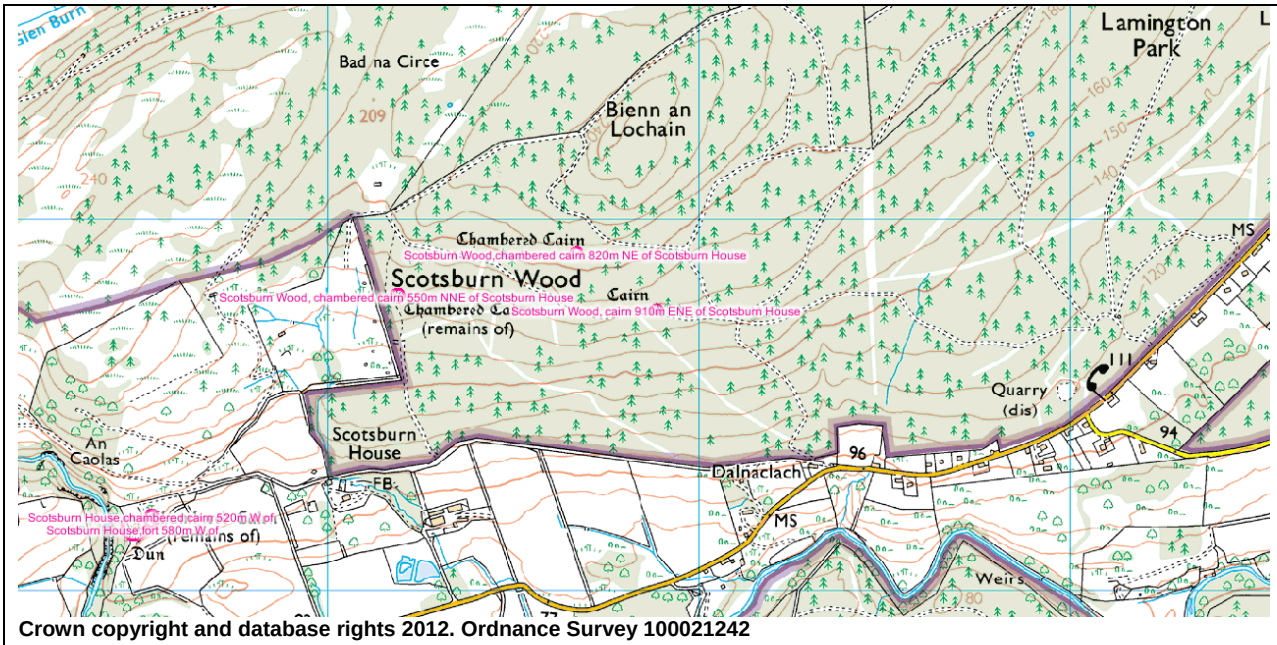
Possible chamber, facing E (CP 5)

[1] GENERAL DESCRIPTION

The monument sits on a S-facing slope on a natural terrace with views towards the Cromarty Firth. It measures approximately 17m x 11.5m on an E-W alignment and comprises a low mound of loose stones forming a burial cairn. There are two depressions in the centre, which may represent a collapsed chamber or unrecorded early excavation. The cairn sits directly above the ditch associated with a forestry track, which runs along the south edge of the cairn.



Chambered tombs are large structures for communal burial, dating from the Neolithic period (c. 4,400 BC – 2,900 BC). Most would have originally consisted of a burial chamber and entrance passage covered by an earthen barrow or stone cairn. Chambered tombs were built and used by local communities over long periods of time. There appear to be many regional traditions and variations in shape and construction. The monument has significant archaeological potential to enhance our knowledge of prehistoric ritual and burial rites, social organisation and the environment.



The scheduled area is a circle 30m across but excluding a part of the circle cut chord-wise from its S side, where the forestry road runs close to the cairn.

[2] HISTORIC SCOTLANDMONUMENT WARDEN REPORT(S)

Date of visit	Site Condition Score	Deterioration Risk Score	Historic Scotland Priority Index
30/11/2005	3	2	3.6

[3] OBJECTIVES OF MANAGEMENT

Objective	***General aims and objectives***
CONSERVATION	The main objective of management is to ensure the stable condition of the monument and to ensure that the monument and its surrounding area are kept free of trees, scrub and bracken, thereby preserving both the archaeological remains and their setting.
ACCESS	The objective is to maintain and improve public access to the monument, and to enhance its setting in the wider landscape. The monument is easily accessed from the forestry track.
INTERPRETATION	No interpretation is recommended for this site.
SETTING	The monument is readily visible from the track running adjacent to it. There are trees on its northern side but the monument generally sits in an open space. Views from the monument to the Cromarty Firth and beyond are visible through scant trees to the south of the track.

[4] ISSUES REQUIRING ATTENTION: POTENTIAL OR EXISTING THREATS

CONDITION OF MONUMENT

The cairn comprises a low mound of loose stones measuring approximately 17m x 11.5m (E-W). The construction of a forestry track to the S of the cairn has possibly truncated its southern extent. The southern edge of the cairn sits directly above the ditch running alongside the track and there is potential for erosion problems here.

Two depressions are evident in the centre of the cairn but it is difficult to ascertain whether either, or both, is a chamber. The depressions may be as a result of collapse or, more likely, early excavation or robbing. A sandstone slab set on edge on the south side of the cairn may be a lintel moved from the chamber.

Birch and conifer trees border the N edge of the cairn. Seeds from these trees are setting on the monument and regeneration is occurring. Generally, the monument is covered with a mix of moss, heather, grass, bracken, bilberry and gorse.

Historic Monument Warden's notes (30/11/2005):

The birch trees noted have not been removed. However they have not grown greatly and the Scots pine are similarly slow growing. Ideally when work is carried out in the area the trees immediately adjacent to the cairn will be cut and removed and the nearby trees will be thinned on a continuing programme. There has not been any further work done on the forestry track beside the cairn.

Issue	***General descriptions with specific details***
FOREST OPERATIONS (*if appropriate*)	All forestry operations in the surrounding area will be planned and organised to avoid any damage to the monument in the course of harvesting and timber extraction. No replanting will take place within the scheduled area.
BUFFER ZONE	An unplanted buffer zone of 20m will be retained around the scheduled area.
VEGETATION / NATURAL REGENERATION	The birch and conifer trees immediately adjacent to the cairn on its N side should be removed to prevent damage from wind thrown trees. All regeneration should be removed from the scheduled area. Over time, the continued growth of ground vegetation will obscure the site and monitoring is recommended.
PUBLIC AND OTHER ACCESS	The Scottish Outdoor Access Code ensures the public right to responsible access.

[5] SPECIFIC WORK PROPOSED IN THE PLAN PERIOD

The following operations are proposed within the Plan Period:

Detail of work	Detail of time / condition of response
Removal of birch and Scots pine trees immediately adjacent to the N side of the cairn	Removal of the birch and Scots pine trees immediately adjacent to the N side of the cairn should be given immediate attention. There is the potential of damage to the cairn by root action and wind throw. These will be felled by hand and removed from the scheduled area.
Monitor the condition of the monument and ensure the removal of all intrusive scrub vegetation and regeneration.	If required, clearance will occur at least once every five years and will be undertaken by Forest District staff or contractors. All scrub vegetation, bracken and naturally regenerating trees on and around the upstanding structures will be cut off at ground level using appropriate hand or power tools and removed. Where necessary the cut roots of invasive vegetation will be poisoned with an appropriate herbicide.
	No work will be undertaken in the scheduled area other than work previously agreed with Historic Scotland and detailed in this plan.

[6] ARRANGEMENTS FOR MONITORING

Type of monitoring	Detail of recording
FCS staff will formally inspect the condition of the monument once every five years and alongside the Historic Scotland Field Monument Warden during the next scheduled visit within the Historic Scotland Field Monument Warden programme.	The Forest District will record when any major management action (described within this plan) was undertaken (i.e. year action undertaken) within the Designated Historic Assets Register.

AGREEMENT TO THE PLAN

This is an agreement under section 17 of the Ancient Monuments and Archaeological Areas Act 1979. Only works which are carried out in fulfilment of the Occupier's obligations and which are specifically identified in this Agreement are deemed to have been granted Scheduled Monument Consent under the Ancient Monuments Class Consents Order *(Scotland)* 1996. The Occupier must apply for the Consent of the Scottish Ministers prior to undertaking any further works affecting the Area.

Signed on behalf of Forestry Commission Scotland by: **FCS Archaeologist**
Date of signature:

Signed by Historic Scotland on behalf of the Scottish Ministers by:
Date of signature:

Scotsburn Wood cairn (July 2012 photographic record)

No.	Direction Facing	Camera Position	Notes	Taken By	Date
1	N	CP1	Cairn lying on the N side of the forest track and ditch	LF	31/07/2012
2	NW	CP2	Cairn and forest track and ditch	LF	31/07/2012
3	NE	CP3	Cairn and forest track and ditch	LF	31/07/2012
4	W	CP4	Two depressions in the centre of the cairn	LF	31/07/2012
5	E	CP5	Two depressions in the centre of the cairn	LF	31/07/2012
6	SSW	CP6	Two depressions in the centre of the cairn	LF	31/07/2012
7	SSW	CP6	Viewshed from the cairn	LF	31/07/2012
8	NNE	CP7	Cairn lying on the N side of the forest track and ditch	LF	31/07/2012

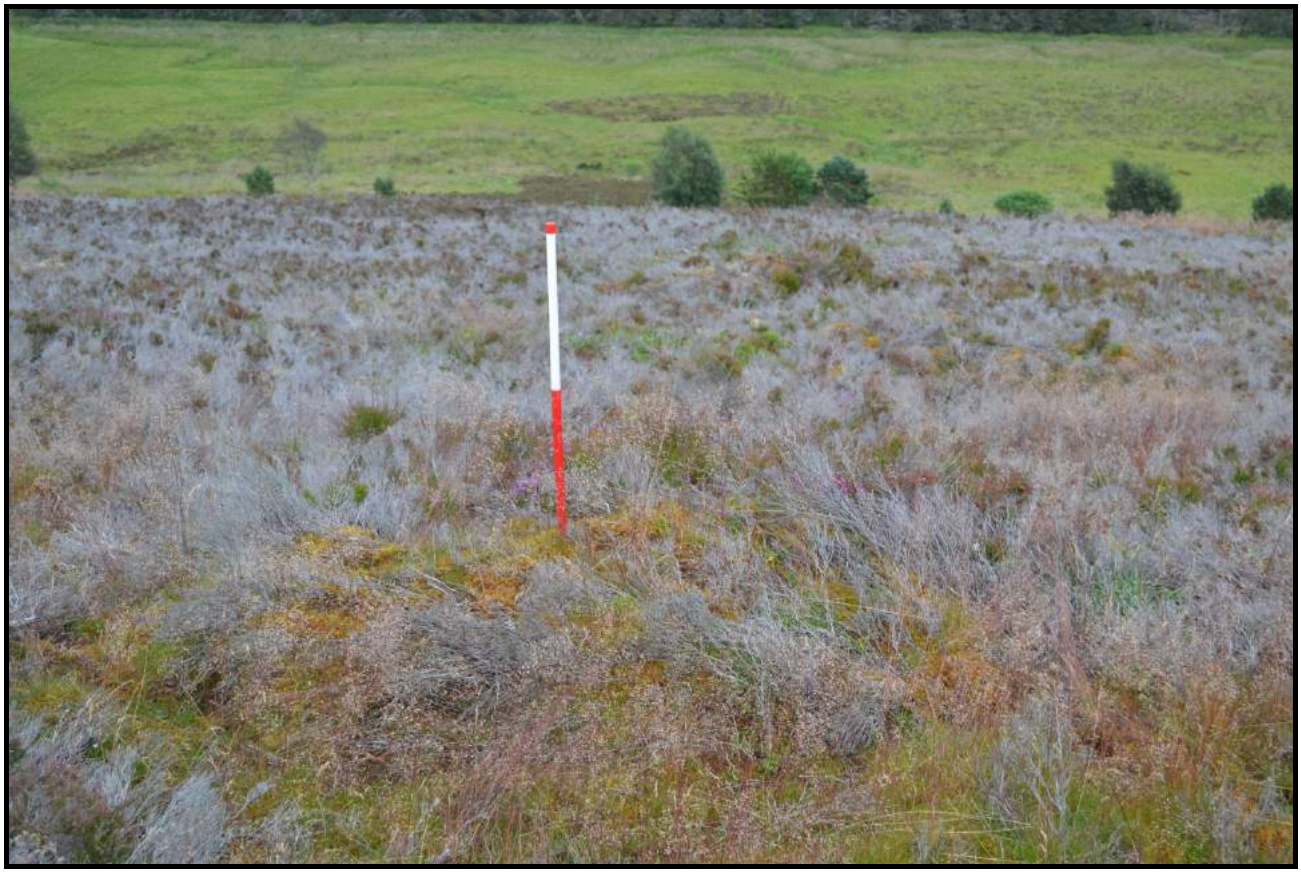
Monument: Provost's Well, hut circles and field system 150m NW of

SM ref: 4743

Forest District:	**North Highland**
Plan start:	**01/04/2013**
Plan finish:	**31/03/2023**
MMP class:	**2**
Grid ref:	**NH 731 786**
NMRS Number:	**NH77NW030**
HS Casework area:	**NW**
MMP prepared by:	**L Fraser**
Site visit: (Date)	**1st August 2012**
(Attendees)	**Steven Birch, Lynn Fraser**

Hut circle B, facing NW (CP7).

Hut circle A, facing S (CP12).

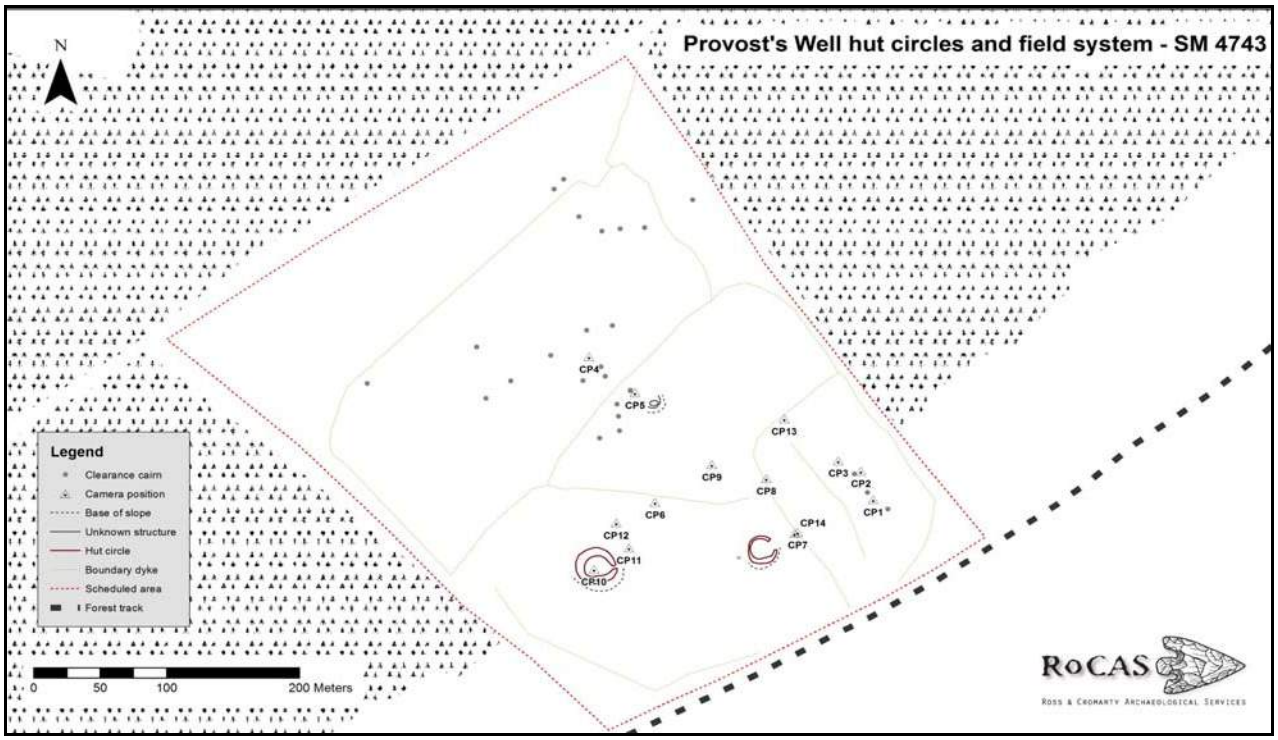


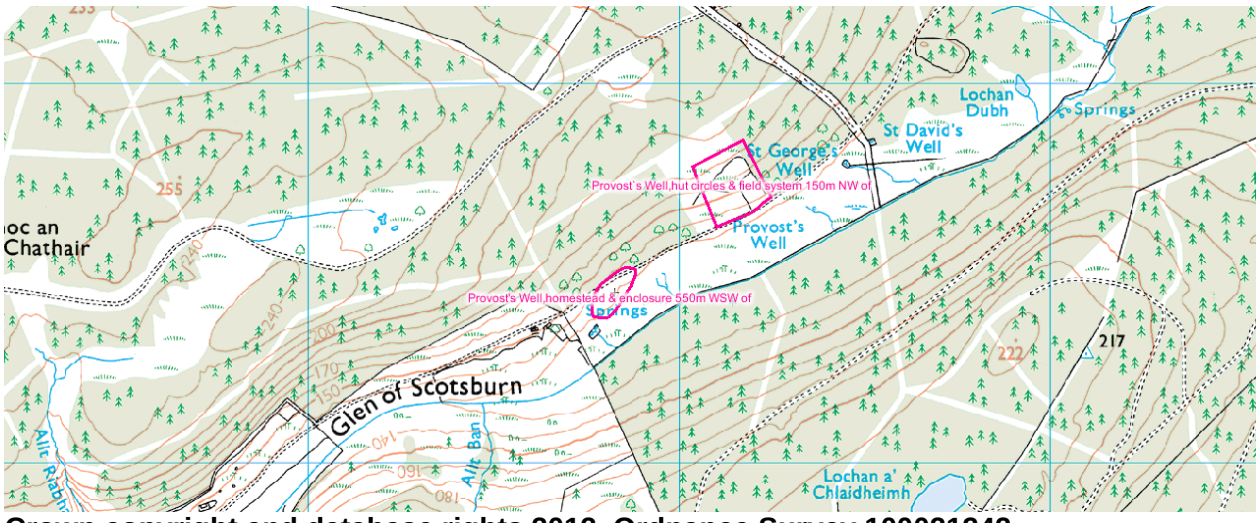
Clearance cairn with others running downhill, facing SSE (CP 4).

[1] GENERAL DESCRIPTION

This monument comprises a well-defined prehistoric settlement and field system located on the S-facing slope of the Glen of Scotsburn. The hut circle to the W is a scooped house platform with a low bank surviving; the second hut circle is a scooped platform with stone and turf banks with an entrance to the NE. The two hectare field system consists of clearance cairns and a network of stone-built field walls forming three large subdivided fields.

The site is of national importance as a well-preserved prehistoric settlement and field system, which can enhance our understanding of prehistoric settlement and agriculture. It is of further importance because it displays two distinct house types, which can increase our understanding of prehistoric structural techniques.





The scheduled area measures 160m NE-SW by 180m, bounded on the SE by a forest track, and includes the structures.

[2] HISTORIC SCOTLANDMONUMENT WARDEN REPORT(S)

Date of visit	Site Condition Score	Deterioration Risk Score	Historic Scotland Priority Index
05/03/2008	2	1	2.2

[3] OBJECTIVES OF MANAGEMENT

Objective	***General aims and objectives***
CONSERVATION	The main objective of management is to ensure the stable condition of the monument and to ensure that the monument and its surrounding area are kept free of trees, scrub and bracken, thereby preserving both the archaeological remains and their setting.
ACCESS	The objective is to maintain and improve public access to the monument, and to enhance its setting in the wider landscape. The monument is easily accessed from the forestry track.
INTERPRETATION	No interpretation is recommended for this site.
SETTING	The site is situated in open moorland/rough grazing to the N of the forest track.

[4] ISSUES REQUIRING ATTENTION: POTENTIAL OR EXISTING THREATS

CONDITION OF MONUMENT

The site sits on the S-facing slope of the Glen of Scotsburn, immediately above a forestry track. The site slopes steeply in places and is generally wet and boggy; it is covered in grass, moss and deep heather with some apparent tree regeneration. Visibility of the features is generally very poor.

The site contains two hut circles set on a terrace, which are the principal features. The western-most hut circle, **A**, measures approximately 12m x 10m with the northern-most wall built into the slope to a height of about 1.2m. The walls consist mainly of stone and rubble with one or two large boulders visible and are moss- and turf-covered. They stand generally to a height of 0.5m. A degraded entrance can be seen in the SSE arc. The eastern-most hut circle, **B**, measures approximately 10m in diameter and is marked by a single, large boulder adjacent to its W arc. It is revetted into the bank and comprises moss- and turf-covered stone/rubble walls to a height of about 0.5m. A degraded entrance is visible in the SSE arc. Both hut circles are boggy in the interior and rushes are growing, particularly at hut circle **A**.

There are the remnants of an extensive network of dykes evident, particularly in the upper section of the site. They are primarily stone-built but are now peat and turf covered in places Orthostats and boulders are set on edge along all the dykes apart from those running directly upslope. Those running directly upslope are about 2-2.5m wide and 0.25-0.3m high; other dykes are 1-2m wide and 0.25-0.3m high. Heather made it difficult to see the dyke alignments.

Clearance cairns of varying sizes proliferate across the site. They present as amorphous shapes with stones close to the surface. They are generally found on two terraces and appear to have

been enclosed within the dyke system. Most are about 0.5m high. Erosion from cattle is evident around the edges of many of the clearance cairns.

A possible shieling was identified but its degraded state prevented definite interpretation.

Historic Scotland Field Officer report (05/03/2008):

The monuments are in a stable condition with very little change since the previous visit. The W hut circle lies at NH 7309678677 it is c.12m across internally and is set into the slope. The E hut circle lies at NH73159 78683 it is c.11m across internally and also set into the slope; a large stone lies to theW of the hut circle. The dykes are unchanged and there are several clearance cairns in the area, including several to the NNW of the scheduled area. The SW and SE edges of the forestry plantation have been planted with young deciduous trees and were noted at NH73095 78605 and NH 73251 78684, these coincide with the edges of the scheduled area. Ideally these should be removed 20m beyond the scheduled area. The NE edge of the scheduled area may be planted withconifers ideally these should be removed.

Issue	***General descriptions with specific details***
FOREST OPERATIONS (*if appropriate*)	All forestry operations in the surrounding area will be planned and organised to avoid any damage to the monument in the course of harvesting and timber extraction. No replanting will take place within the scheduled area.
BUFFER ZONE	A buffer zone is considered unnecessary as the scheduled area already defines a large open space.
VEGETATION / NATURAL REGENERATION	The site is covered in deep heather, which obscures the features within the site. Rushes are beginning to encroach on the hut circles. Some regeneration is occurring.
PUBLIC AND OTHER ACCESS	The Scottish Outdoor Access Code ensures the public right to responsible access.

[5] SPECIFIC WORK PROPOSED IN THE PLAN PERIOD

The following operations are proposed within the Plan Period:

Detail of work	**Detail of time / condition of response**
Monitor the condition of the monument and ensure the removal of all intrusive scrub vegetation and regeneration from the identified hut circles and the areas immediately around them (affording each a managed zone extending at least 10m from their foundations).	If required, clearance will occur at least once every five years and will be undertaken by Forest District staff or contractors. All scrub vegetation, bracken and naturally regenerating trees on and around the upstanding structures will be cut off at ground level using appropriate hand or power tools and removed. Where necessary the cut roots of invasive vegetation will be poisoned with an appropriate herbicide.
	No work will be undertaken in the scheduled area other than work previously agreed with Historic Scotland and detailed in this plan.

[6] ARRANGEMENTS FOR MONITORING

Type of monitoring	Detail of recording
FCS staff will formally inspect the condition of the monument once every five years and alongside the Historic Scotland Field Monument Warden during the next scheduled visit within the Historic Scotland Field Monument Warden programme.	The Forest District will record when any major management action (described within this plan) was undertaken (i.e. year action undertaken) within the Designated Historic Assets Register.

AGREEMENT TO THE PLAN

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Signed on behalf of Forestry Commission Scotland by: **FCS Archaeologist**
Date of signature:

Signed by Historic Scotland on behalf of the Scottish Ministers by:
Date of signature:

Provost's Well hut circles and field system (August 2012 photographic register)

No.	Direction Facing	Camera Position	Notes	Taken By	Date
1	SE	1	Clearance cairn	LF	01/08/2012
2	SSE	2	Clearance cairns	LF	01/08/2012
3	ESE	3	Clearance cairns	LF	01/08/2012
4	SSE	4	Clearance cairns	LF	01/08/2012
5	E	5	Possible shieling or hut circle	LF	01/08/2012
6	NNE	6	Stones in dyke	LF	01/08/2012
7	NW	7	Hut circle B	LF	01/08/2012
8	S	8	Hut circle B	LF	01/08/2012
9	S	8	Hut circle B	LF	01/08/2012
10	S	9	Hut circle B	LF	01/08/2012
11	N	10	Hut circle A, back wall built into the hill	LF	01/08/2012
12	SW	11	Hut circle A	LF	01/08/2012
13	S	12	Hut circle A	LF	01/08/2012
14	S	12	Hut circle A	LF	01/08/2012
15	SSE	13	View from site across valley	LF	01/08/2012
16	SE	13	View from site across valley	LF	01/08/2012
17	NW	14	Dyke	LF	01/08/2012
18	NW	14	Dyke	LF	01/08/2012

Forestry Commission Scotland

Monument: Provost's Well, homestead and enclosure 550m WSW of

SM ref: 4760

Forest District: North Highland
Plan start: 01/04/2013
Plan finish: 31/03/2023
MMP class: 2

Grid ref: NH 728 784
NMRS Number: NH77NW032
HS Casework area: NW

MMP prepared by: L Fraser
Site visit: (Date) 12th September 2012
(Attendees) Lynn Fraser

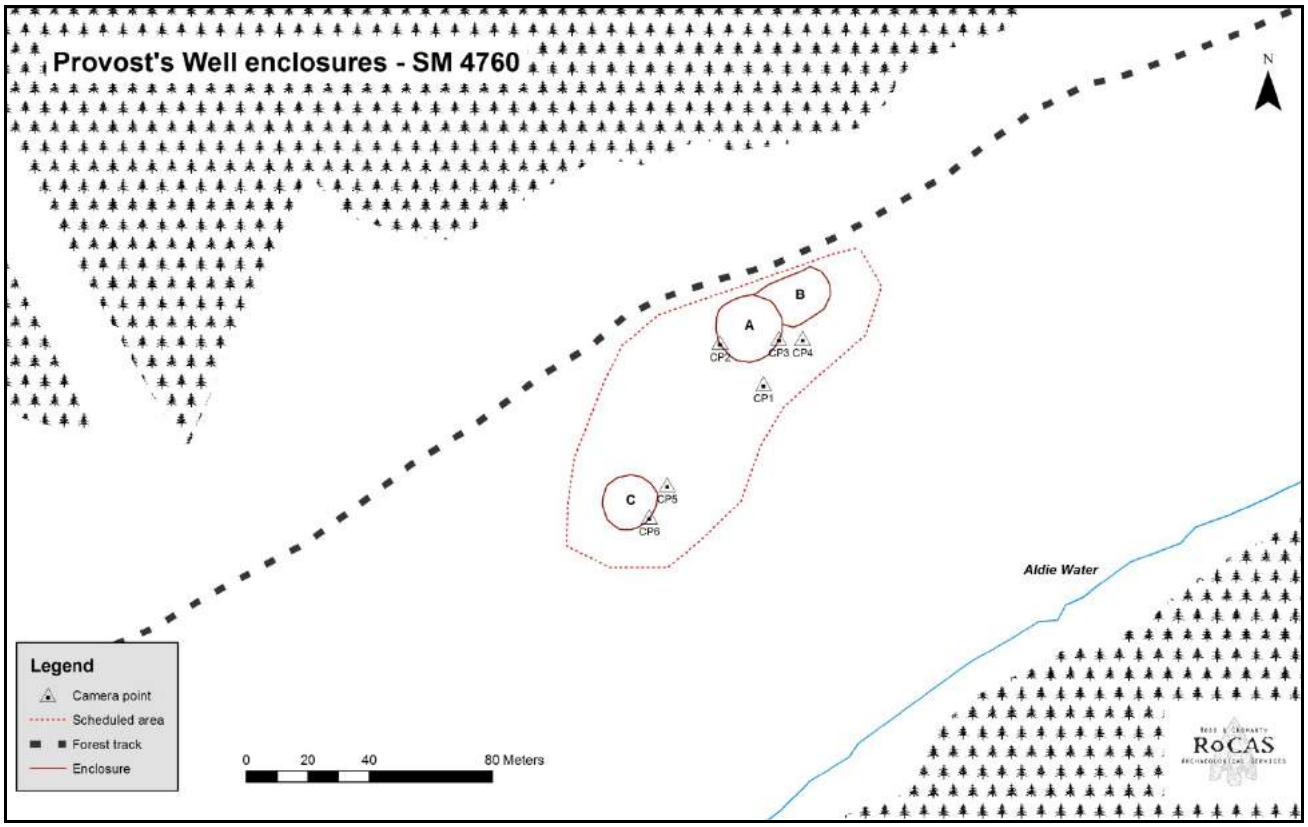
Enclosure A, facing NNW (CP1)

Enclosure B, facing NNE (CP3)

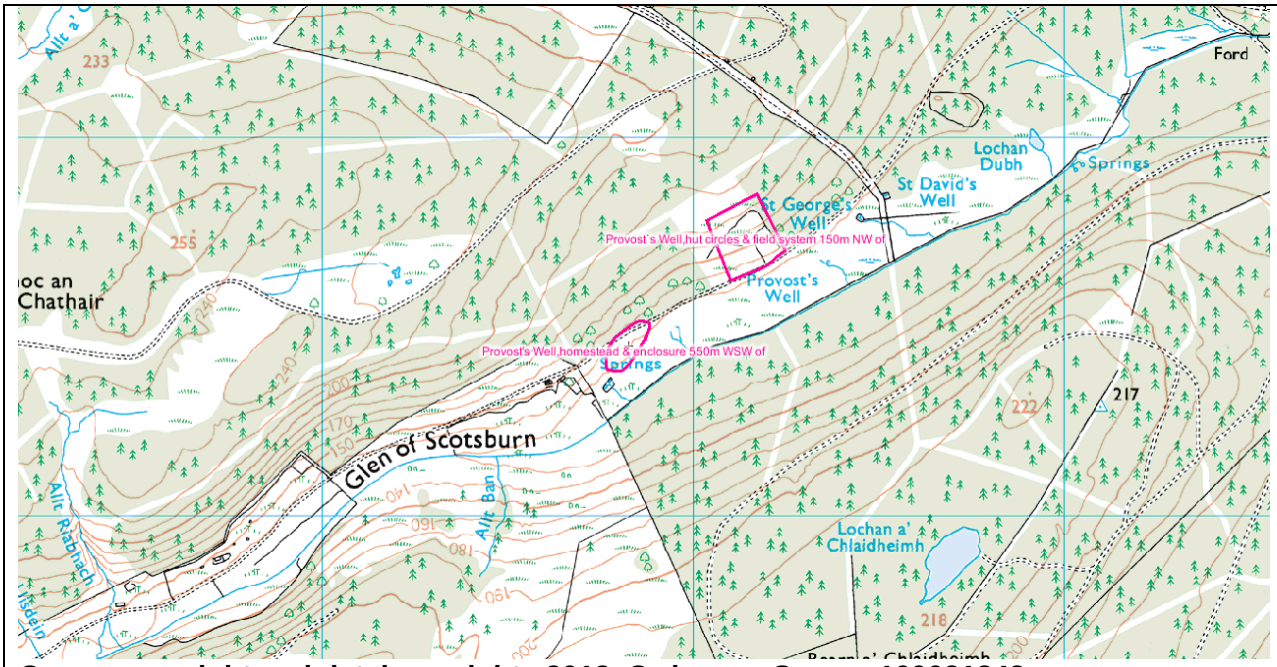
Enclosure C, facing SW (CP5)

[1] GENERAL DESCRIPTION

This site comprises three prehistoric monuments that are referred to both as enclosures and hut circles in the records. They are situated to the S of a forest track in open moorland, which comprises heather, grass and bracken; the area is obviously grazed by cattle. Structures **A** and **B** have been levelled into the hillside on the N below the track. **A** measures approximately 16m across internally and overlies **B** on its E side; **B** measures approximately 16m x 12m across internally. Both have walls spread 2-3m across with walling apparent, although mostly obscured by vegetation. Structure **C** lies to the SW of **A** and **B** on a natural terrace and measures about 14m across internally. It is generally obscured by vegetation but one or two stones are visible. There is no trace of associated field systems.



Hut circles are characteristic of Bronze and Iron Age settlement sites and represent the remains of timber-roofed roundhouses. The monument is of national importance because the enclosures represent the remains of a prehistoric settlement of unusual and distinct type. They can give us a greater understanding of prehistoric settlement in general and structural techniques in particular.



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The scheduled area measures 160m NE-SW by 70m transversely to include the structures described above and an area around them in which activities associated with their use may survive.

[2] HISTORIC SCOTLAND MONUMENT WARDEN REPORT(S)

Date of visit	Site Condition Score	Deterioration Risk Score	Historic Scotland Priority Index
05/03/2008	2	1	2.2

[3] OBJECTIVES OF MANAGEMENT

Objective	***General aims and objectives***
CONSERVATION	The main objective of management is to ensure the stable condition of the monument and to ensure that the monument and its surrounding area are kept free of trees, scrub and bracken, thereby preserving both the archaeological remains and their setting.
ACCESS	The objective is to maintain and improve public access to the monument, and to enhance its setting in the wider landscape. The monument is easily accessed from the forestry track.
INTERPRETATION	No interpretation is recommended for this site.
SETTING	The site is situated in open moorland/rough grazing to the S of the forest track.

[4] ISSUES REQUIRING ATTENTION: POTENTIAL OR EXISTING THREATS

CONDITION OF MONUMENT

Structure **A**:
This is a sub-circular enclosure/hut circle that has a scooped appearance with the N side having been levelled into the hillside. It measures approximately 16m in diameter and has substantial stone walls, which are best preserved on the N and W where they stand to a height of 2m internally and are spread over 2m wide. On the S side the wall stands to 0.75m high on the external side but is totally obscured by moss and heather. The E wall overlies the immediately adjacent structure **B** where it is again totally obscured by vegetation, but spreads over 2m. The proliferation of vegetation hampered attempts to locate an entrance. There is a gap in the walling on the W side, but this may have been caused by tumble and the movement of cattle through the structure. The structure is currently covered in grass and heather, but bracken is beginning to encroach; there is a substantial amount of bracken to the W of **A**, which appears to be obscuring possible stonework.

Structure **B**:
This is a D-shaped enclosure/hut circle that has a scooped appearance with the N side having been levelled into the hillside. It is overlain on the W side by structure **A** suggesting that it is the earliest structure of the two. It measures approximately 16.5m NE-SW by 12.5m within a wall showing some outer and inner facing stones; inner walling is visible on the E and S sides and two courses of outer walling at the SW corner. The N wall stands to about 3m internally. The structure is mainly grass-covered with some heather on the walls and low bracken around the wall edges but beginning to spread into the interior.

Structure **C**:
This hut circle lies to the WSW of structures **A** and **B** on a natural terrace. It measures approximately 14m in diameter with low stone walls that are almost totally obscured by grass and heather. The walling is best defined on the N, E and S with the walls spread over 1.5-2m and standing to a height of 1m on the N to 0.5 on the W and 0.25 on the S and E. The structure is mainly moss- and grass-covered, with heather in the centre and on the W side.

Historic Scotland Field Officer report (05/03/2008):

The monuments are in a stable condition with very little change since the previous visit. The SW hut circle lies at NH 72828 78426 and is c.12m across internally. The NE complex is at NH 72874 78484, W most structure is c.15m across internally and the structure immediately to the E is c.12m across internally and there is a possible third structure to the E. There is visible stone on the walls of all these 3 structures. There is bracken on the central structure and there is a large area of bracken between the NE and SW structures. Ideally the bracken should be sprayed however there are several springs in the nearby area and spraying may not be possible. The trees noted in the previous report are still on the site but do not appear to be increasing or posing a threat to the structures. However there is an increase in whin along the edge of the track and this is spreading and should be controlled.

Issue	***General descriptions with specific details***
FOREST OPERATIONS (*if appropriate*)	All forestry operations in the surrounding area will be planned and organised to avoid any damage to the monument in the course of harvesting and timber extraction. No replanting will take place within the scheduled area.
BUFFER ZONE	An unplanted buffer zone of 20m will be retained around the scheduled area.
VEGETATION / NATURAL	Bracken should ideally be sprayed and

REGENERATION	thereafter monitored and managed.
PUBLIC AND OTHER ACCESS	The Scottish Outdoor Access Code ensures the public right to responsible access.

[5] SPECIFIC WORK PROPOSED IN THE PLAN PERIOD

The following operations are proposed within the Plan Period:

Detail of work	Detail of time / condition of response
Monitor the condition of the monument and ensure the removal of all intrusive scrub vegetation and regeneration.	If required, clearance will occur at least once every five years and will be undertaken by Forest District staff or contractors. All scrub vegetation, bracken and naturally regenerating trees on and around the upstanding structures will be cut off at ground level using appropriate hand or power tools and removed. Where necessary the cut roots of invasive vegetation will be poisoned with an appropriate herbicide.
	No work will be undertaken in the scheduled area other than work previously agreed with Historic Scotland and detailed in this plan.

[6] ARRANGEMENTS FOR MONITORING

Type of monitoring	Detail of recording
FCS staff will formally inspect the condition of the monument once every five years and alongside the Historic Scotland Field Monument Warden during the next scheduled visit within the Historic Scotland Field Monument Warden programme.	The Forest District will record when any major management action (described within this plan) was undertaken (i.e. year action undertaken) within the Designated Historic Assets Register.

AGREEMENT TO THE PLAN

This is an agreement under section 17 of the Ancient Monuments and Archaeological Areas Act 1979. Only works which are carried out in fulfilment of the Occupier's obligations and which are specifically identified in this Agreement are deemed to have been granted Scheduled Monument Consent under the Ancient Monuments Class Consents Order *(Scotland)* 1996. The Occupier must apply for the Consent of the Scottish Ministers prior to undertaking any further works affecting the Area.

Signed on behalf of Forestry Commission Scotland by: **FCS Archaeologist**
Date of signature:

Signed by Historic Scotland on behalf of the Scottish Ministers by:
Date of signature:

Provost's Well homestead and enclosure (September 2012 photographic register)

No.	Direction Facing	Camera Positions	Notes	Taken By	Date
1	N	1	Structure A	LF	12/09/2012
2	NNW	1	Structure A	LF	12/09/2012
3	N	1	Structure A	LF	12/09/2012
4	ENE	2	Looking across structure A to structure B	LF	12/09/2012
5	NNE	3	Structure B	LF	12/09/2012
6	N	4	Structure B, walling visible in SW corner	LF	12/09/2012
7	SW	5	Structure C	LF	12/09/2012
8	NW	6	Structure C, towards N wall	LF	12/09/2012

Forestry Commission Scotland

Appropriate assessment of forestry proposals which are likely to have a significant effect on a European site.

(The Conservation of Natural Habitats, &c.) Regulations 1994. Regulation 48.)

1a. Name of European site affected by the application and current designation status.

Morangie Forest - SPA

1b. Name of Component SSSI if relevant

N/A

2. Features of European interest, whether priority or non-priority; and conservation objectives for qualifying interests

SPA

- *Tetrao urogallus* – Capercaillie: SPA qualifying feature

Conservation objectives for qualifying features

To avoid deterioration of the habitats of the qualifying species (listed below) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained; and

To ensure for the qualifying species that the following are maintained in the long term:

- Population of the species as a viable component of the site
- Distribution of the species within site
- Distribution and extent of habitats supporting the species
- Structure, function and supporting processes of habitats supporting the species
- No significant disturbance of the species

Qualifying Species:

- Capercaillie

2. DETAILS OF PROPOSAL

Name: Easter Ross Land Management Plan
Applicant: Reference:

Description of proposal: Agreement of a Land Management Plan for the National Forest Estate in Easter Ross, along with a Designated Site Planning Section covering multiple designated sites. This plan sets out what management through the Land Management Plan will be carried out and also specific measures for management of the designated sites. The overall aim of the plan is to set out the long-term aims for the NFE in East Ross, agree specific measures that will benefit the designated sites, and also show how Forestry Commission Scotland will manage operations to mitigate any potential damage or disturbance.

Operations:

- Thinning, clearfell, ground preparation and restock.
- Deer management.
- Roads maintenance, upgrade and construction.
- Management and maintenance of formal recreation facilities and events.
- Specific management operations for capercaillie, including modification of ground vegetation, tree canopy structure, wetland creation, predator control, fence removal and marking and monitoring of qualifying feature.

Table 4.3 Outline of possible impacts

Feature	Indirect	Direct	Details
Capercaillie	✓	✓	There could be both short and long-term negative impacts on capercaillie through forest management in Morangie, if not done in a sensitive manner. Too much clear felling, not enough thinning and replanting of the wrong tree species could result in a decline of available habitat for the birds. The loss of habitat from DNB infected crops being felled could also have a significant effect on the available habitat, if not managed sensitively across the whole of the SPA and wider forest. Operations could also have a negative impact on the species (by disturbance during the lek or nesting period) if not manage sensitively. The management proposed within the forest is likely to have a positive impact on the habitat and food availability through continued thinning, restructuring and diversification of the forest on both a large and fine scale. Operations within Morangie are aimed at creating a habitat mosaic to provide all of the ecological niches required across the life cycle of the bird. This is done both on a coupe scale and across the whole of the forest. Crow and fox control should also reduce predation on capercaillie within the Morangie area and management of the few remaining deer fences will also reduce the potential for mortality.

4. Assessment of impact on European interest.

4.1

Is the proposal directly connected with or necessary to the management of the site?
No (if Yes go to 5.)

4.2

Is the proposal likely to have a significant effect on the European interest on the designated site? Yes/No (if yes assess impact on site)

Yes. Both short and long-term the planned operations in Morangie should have a positive effect on capercaillie habitat and food availability. If managed insensitively, they could also have a negative effect on the species and the habitats it requires. This Appropriate Assessment sets out how we propose to mitigate against any potentially negative effect's.

4.3 Outline of possible impacts

See table, as above.

4.4 Summary of assessment in relation to possible impacts

The proposals for the site are assessed below against the Conservation Objectives for qualifying features.

Population of the species as a viable component of the site.

Loss of habitat through DNB felling or insensitive restock could reduce the available habitat and number birds that it could support. Where suitable, and through the agreed forest plan, some open areas within Morangie will be either planted or will be allowed to regenerate with woodland types that capercaillie will find beneficial (primarily mixed pinewood with native broadleaves, larch and norway spruce). First thinning will also take place within, and adjacent to the SPA, which will open up other areas of plantation for use by capercaillie through provision of flight-lines through the crop, promotion of wider branching on large trees for roosting and increase in light levels to the forest floor to improve the quality and abundance of ground vegetation, such as blaeberry (*vaccinium myrtillus)*. Thinning and restock operations should mitigate any loss of crops to DNB by providing alternative habitat, although it should be noted that most of the DNB infected areas are young, un-thinned coupes which are not particularly well used by capercaillie at the moment. Loss of individuals to predation and fence strikes could also reduce the population size. This plan states that predator control will continue across the designated site, and in adjacent FCS managed land, which will reduce predation by crow and fox (particularly on young birds). The few remaining deer fences within Morangie are planned for either removal, reduction to stock fence or marking with wooden droppers. This will reduce the chances of fence strike by both capercaillie and black grouse.

Distribution of the species within site

The potential effects on the site are similar to those above and would be managed in the same way.

Distribution and extent of habitats supporting the species

While the actual wooded area within Morangie SPA will only increase over time due to natural regeneration and new planting onto currently open habitats, DNB felling has the potential to reduce the cover of larger trees in the short term. Leaving these areas is not a viable option as it will provide a source of infection for adjacent crops, while some areas have already died or have been severely infected by the disease to the point where retaining them long-term is not a sensible alternative. We aim to offset this loss of young, un-thinned crops to DNB by thinning other areas, which will provide more 'available' habitat for capercaillie by improving the forest structure. The core areas for capercaillie will not be affected by felling as most of the crops are older and have already been well thinned, which seems to result in lower infection rates. The restock of DNB infected areas will be designed to benefit capercaillie in the long-term, with

internal open space, wet areas and a diversity of tree species suitable for use by capercaillie. Wherever possible, we will continue to thin crops and use continuous cover forestry to create an uneven structure to the forest that will provide all of the ecological niches required by capercaillie during their life cycle. Current programmes also aim to improve brood habitat by vegetation swiping to promote blaeberry and cotton grass, creation or expansion of wetland areas and improving brood cover from predators (brash piling, planting of shrub layer, etc).

Structure, function and supporting processes of habitats supporting the species
As discussed above, we feel that diversification of the habitat on a fine scale, continued thinning (including first thinning of young crops) and predator control will help to ensure that the habitat required by capercaillie throughout their life cycle is present in good quality and of enough quantity to support a robust breeding population.

No significant disturbance of the species
All works within Morangie and the surrounding forests will be risk assessed by the district Environment Team, with specialist input from the FES Species Ecologist and the Capercaillie Project Officer as and when required. Where applicable, operations will be managed in line with FC Guidance Note 32 on Forest Operations and Birds in Scottish Forests and the Capercaillie BAP Group guidance on Avoiding Disturbance of breeding Capercaillie. Pre-operations checks of sites within Morangie and the surrounding forests by the district Environment Team, lek counts, brood counts and roving records will inform on the presence and distribution of capercaillie in and around each coupe, which will influence when operations will take place.
This will ensure that no significant disturbance of capercaillie is allowed to happen.
It should be noted though that we have a general to try and avoid operations in Morangie between the end of February and the start of August, although as stated elsewhere the Environment Team in the district will risk assess all operations within the area.
Recreation sites and events will be managed to minimise disturbance to capercaillie, with the main aim being to maintain current formal facilities and encourage members of the public to use these areas, thereby reducing disturbance elsewhere. Again, recreation events would be risk assessed by the Environment Team to ensure that no disturbance takes place at key times of year (lek and nesting period).

4.5 Any other comments
None.

4.6 What would be the outcome on the site if the proposals not approved.
If these proposals were not approved, works to benefit capercaillie and the Struie Channels SSSI would not be undertaken. While some felling will be required, this presents opportunities to provide a more diverse structure in the area for capercaillie which will be beneficial in both the long and short term. The proposals would also have a negative effect on tree health (through retention of diseased crops as a source of infection) and would also have a negative financial impact through further degradation of crops that are currently able to be harvested, but if left longer will cost more to cut and extract. This loss of income would likely run into the ten's of thousand's of pound's (based on other similar sites).

5 Conclusions

Will the proposal adversely affect the integrity of the European site:
By planning to keep disturbance to a minimum using available guidance, surveys by experienced staff and expert advice when required, we feel that these proposals will not have a negative impact on the integrity on the Morangie SPA.
Continued thinning operations will offset the loss of un-thinned crops to DNB felling.

6 Conditions required (if any)

FC Guidance Note 32 on Forest Operations and Birds in Scottish Forests and the Capercaillie BAP Group guidance on Avoiding Disturbance of breeding Capercaillie will be followed as and when required. Specialist advice from the FES Species Ecologist and the Capercaillie Project Officer will be sought as and when required.

Signed

Woodland officer/Area Officer:
Date :

Ops Manager/ Conservator:
Date:

Forestry Commission Scotland

Appropriate assessment of forestry proposals which are likely to have a significant effect on a European site.

(The Conservation of Natural Habitats, &c.) Regulations 1994. Regulation 48.)

1a. Name of European site affected by the application and current designation status.

Dornoch Firth and Loch Fleet - SPA
Dornoch Firth and Morrich More SAC

1b. Name of Component SSSI if relevant

N/A

2. Features of European interest, whether priority or non-priority; and conservation objectives for qualifying interests

Pandion haliaetus – Osprey: SPA qualifying feature

Conservation objectives for qualifying features:

To avoid deterioration of the habitats of the qualifying species (listed below) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained; and
To ensure for the qualifying species that the following are maintained in the long term:

- **Population of the species as a viable component of the site**
- **Distribution of the species within site**
- **Distribution and extent of habitats supporting the species**
- **Structure, function and supporting processes of habitats supporting the species**
- **No significant disturbance of the species**

Lutra lutra – Otter: SAC qualifying feature

Conservation objectives for qualifying features:

To avoid deterioration of the qualifying habitats (listed below) thus ensuring that the integrity of the site is maintained and the site makes an appropriate contribution to achieving favourable conservation status for each of the qualifying features; and
To ensure for the qualifying habitats that the following are maintained in the long term:

- **Extent of the habitat on site**
- **Distribution of the habitat within site**
- **Structure and function of the habitat**
- **Processes supporting the habitat**
- **Distribution of typical species of the habitat**
- **Viability of typical species as components of the habitat**
- **No significant disturbance of typical species of the habitat**

2. DETAILS OF PROPOSAL

Name: Easter Ross Land Management Plan
Applicant: Reference:

Description of proposal: Agreement of a Land Management Plan for the National Forest Estate in Easter Ross, along with a Designated Site Planning Section covering multiple designated sites. This plan sets out what management through the Land Management Plan will be carried out and also specific measures for management of the designated sites. The overall aim of the plan is to set out the long-term aims for the NFE in Easter Ross, agree specific measures that will benefit the designated sites, and also show how Forestry Commission Scotland will manage operations to mitigate any potential damage or disturbance.

Operations:

- Thinning, clearfell, ground preparation and restock.
- Deer management.
- Roads maintenance, upgrade and construction.
- Management and maintenance of formal recreation facilities and events.
- Specific management operations for otter and osprey, including modification of ground vegetation, tree canopy structure, wetland creation and marking and monitoring of qualifying feature.

Table 4.3 Outline of possible impacts

Feature	Indirect	Direct	Details
Osprey	✓	✓	There could be both short and long-term negative impacts on osprey through forest management throughout the LMP area, if not done in a sensitive manner. The threats largely relate to timing of operations and loss of habitat or breeding sites from inappropriate felling ops. The management proposed within the forest is likely to have a positive impact on nesting habitat through continued thinning, restructuring and diversification of the forest on both a large and fine scale and the promotion of natural reserve and CCF systems leading to minimal disturbance. Operations across the LMP area are aimed at creating a habitat mosaic to provide all of the ecological niches required by pinewood species and species using the forest for breeding. This is done both on a coupe scale and across the whole of the forest.
Otter	✓	✓	Negative impacts include loss of habitat or disturbance through inappropriate or poorly timed forest ops. Positive impacts include the extension of significant areas of natural reserve and CCF and the establishment of significant areas if riparian woodland network.

4. Assessment of impact on European interest.

4.1

Is the proposal directly connected with or necessary to the management of the site?

YES (if Yes go to 5.)

4.2

Is the proposal likely to have a significant effect on the European interest on the designated site? Yes/No

4.3 Outline of possible impacts

See table, as above.

4.4 Summary of assessment in relation to possible impact

4.5 Any other comments

None.

4.6 What would be the outcome on the site if the proposals not approved.

5 Conclusions

Will the proposal adversely affect the integrity of the European site:

By planning to keep disturbance to a minimum using available guidance, surveys by experienced staff and expert advice when required, we feel that these proposals will not have a negative impact on the integrity of the designated sites.

Continued thinning operations will offset the loss of un-thinned crops to DNB felling.

The expansion of suitable habitat and the provision through these proposals of a diverse forest structure managed using low impact silviculture will have a positive effect on the sites and qualifying features

6 Conditions required (if any)

FC Guidance Note 32 on Forest Operations and Birds in Scottish Forests and the FC guidance on European Protected Species and Otters and forestry will be followed as and when required. Specialist advice from the FES Species Ecologist and the external biodiversity stakeholders will be sought as and when required.

Signed

Woodland officer/Area Officer:
Date :

Ops Manager/ Conservator:
Date:

Supporting documents: Designated Site Planning

Designated sites covered by this document

Kinrive-Strathrory SSSI
Struie channels SSSI
Morrich More SSSI
Morangie Forest SPA
Dornoch Firth and Loch Fleet SPA
Dornoch Firth and Morrich More SAC
Dornoch Firth and Loch Fleet RAMSAR

Dates of plan

Start date of plan: 2014
End date of plan: 2019

The Land Management Plan runs for 10 year's, however this Designated Site Planning document will be reviewed at year 5 in line with the mid-term review to ensure that it is still fit for purpose.

Management Aims & Objectives

The aim of this Plan is to fully take into account any management and mitigation required for the designated land on and around the National Forest Estate based on the area covered by the Easter Ross Land Management Plan.

This plan aims to act as a basis for targeted management for the notified features and to recognise other operations which may affect them through general use and management of the land on the National Forest Estate (NFE).

Section 1 Designated Sites covered by this Land Management Plan

Table 1: Summary of designations relating to this plan

Designated Site Name	PA Site code	Site Type	Total Area of designated site (ha)	Area in this plan (ha)	% Within this plan	% on NFE
Kinrive - Strathrory	862	SSSI	223.43	135.64	60.71%	60.71%
Struie Channels	1505	SSSI	232.33	231.12	99.48%	99.48%
Morrich More SSSI	1188	SSSI	2930.72	142.59	4.87%	4.87%
Morangie Forest	8549	SPA	3512.92	3450.83	98.23%	98.23%
Dornoch Firth and Morrich More	8242	SAC	8700.53	142.59	1.64%	1.64%
Dornoch Firth and Loch Fleet	8490	SPA	7836.33	142.59	1.82%	1.82%
Dornoch Firth and Loch Fleet	8420	RAMSAR	7836.6	142.59	1.82%	1.82%

Map 3 (Key Features – Environmental) highlights the location of the above designated sites in relation to the LMP boundary and the NFE management area. The plan also shows the other designated site in Easter Ross for context.

For further detail on the designations listed in Table 1, refer to the SNH documentation at the SiteLink page at www.snh.gov.uk/SNHi and on the North Highland Forest District electronic filing system (T/Environment/Designations).

The remainder of this plan will refer in detail only to the elements of the above designated sites on the NFE.

Section 2 Features on the NFE and condition

Only features that exist on the NFE within this LMP are listed in the table below:

Table 2 Features on the NFE within this LMP

Site Type	Site code	Feature description	SCM Condition (Date assessed)	Condition on NFE	Management Classification (if relevant)
SSSI	862	Native Pinewood	Favourable Maintained (2010)	Favourable	N/A
SSSI	862	Springs (including flushes)	Favourable Maintained (2003)	Favourable	N/A
SSSI	1505	Quaternary of Scotland (Geology)	Unfavourable No Change (2001)	Unfavourable Recovering	Due to Management
SSSI	1188	Sand Dunes	Favourable Maintained (2010)	Favourable	N/A
SSSI	1188	Coastal Geomorphology of Scotland	Favourable Maintained (2008)	Favourable	N/A
SSSI	1188	Vascular Plant Assemblage	Favourable Recovered (2006)	Favourable	N/A
SPA	8549	Capercaillie (*Tetrao urogallus*) Breeding	Favourable Maintained (2001)	Favourable	N/A
SAC	8242	Shifting dunes with marram	Favourable Maintained (2010)	Favourable	N/A
RAMSAR	8420	Sand dunes	Unfavourable Declining (2010)	Partially Recovering	Due to management

Native pinewood

A large proportion of the native pinewood in the SSSI can be found on the NFE (in excess of 60%). This is primarily in the large block named Kinrive and in the two large gulleys that run north and south of the main Strathrory glen. Plantation pinewood can also be found alongside the Strathrory River. Over time this will either be felled and allowed to regenerate with native species, or will be thinned out or left to naturally re-space to create a more natural open pinewood habitat. This habitat was found to be in favourable condition with good natural regeneration of native spcies and a good age structure.

Springs (including flushes)

This habitat is primarily found along the lower ground near the Strathrory River. On the NFE it is primarily restricted to the western end of the SSSI. This area is subject to grazing under a lease to a local farmer. This grazing will continue, which should help to maintain favourable condition through trampling and suppression of invasive thistles and bracken.

Quaternary of Scotland (Geology)

Almost all of this feature lies within the NFE. Work was carried out in 2007 to improve sightlines down into the Meltwater channels, and to control natural regeneration in the channels themselves, following site condition monitoring in 2001. This Land Management Plan proposes to return more of the SSSI to open ground, allowing better views into the features from the Struie Road (see Map 6 Future Habitats (c)). Maintenance work will also continue to ensure that unacceptable levels of natural regeneration are controlled on these features. This work should ensure that the status of this feature continues to recover. Access into the designated site will also be improved through the recent improvements to the forest track that runs through the site. FES will also investigate re-opening the old Harrier Watch car park within the designated site on a seasonal basis to encourage the public to view the Meltwater channels.

Sand Dunes (SSSI)

The sand dune habitat on the NFE (which forms a small part of this very large system) is currently classed as Favourable Maintained, which is primarily due to the commitment within the previous long-term forest plan to restore two areas of sand dune habitat. These were previously afforested and have since been felled, with the aim to keep them open and restore them back to sand dune habitat. These areas can be seen on Map 6 Future Habitats (a) to the north and east of the Morrich More forest block. Work will continue to ensure that scrub and regeneration are controlled, although this is likely to be allied to a grazing regime on the dunes to help the restoration process. The brash from the recent felling on the open dune areas will also be removed to help with restoration (through removal of material that would enrich the dunes and encourage invasive species to out-compete more typical dune vegetation).

Coastal Geomorphology of Scotland

A relatively small part of this feature can be attributed to land managed by FES. However, it is part of this large mobile system and as such the effects of management need to be considered. That said, this feature is currently assessed as Favourable and as such we do not propose any change to the actions planned for this forest block (as per this Land Management Plan).

Vascular Plant Assemblage

Most of the species stated in the SSSI Citation do not occur in any great numbers within the NFE, with the exception of variegated horsetail (*Equisetum variegatum*). This species can be found both within the afforested area and in open patches of sand dune, and recent operations have tried to protect and expand these populations through targetted thinning and marking out areas to avoid with heavy machinery while cutting and extracting timber. The majority of the populations exist within the first 200 metres back from the shoreline and are marked on the Forest Districts confidential Conservation Extension in GIS. These populations are significant in terms of their quality and extent, so future work will aim to build on recent previous good work.

Capercaillie (*Tetrao urogallus*) Breeding

Capercaillie are present in vared numbers throughout the main Morangie Forest Block, and occasionally can be found in the outlying Scotsburn Blocks. The location of lek's and any records associated with breeding are stored within the Forest Districts confidential Conservation Extension in GIS. This feature is classed as Favourable, and annual monitoring will continue to provide figures to both FES and SNH to allow them and the Capercaillie BAP group to assess the condition of the population.

Shifting dunes with marram

The shifting sand dune with marram feature is recorded as being in Favourable. Forestry operations are not currently, but have previously been identified as a pressure effecting favourable condition of the shifting sand dune with marram feature and as such the sand dune feature is fully considered in this Land Management Plan, with two significant areas to the north east of the site recently felled to promote movement within the dunes. FCS actively manages this feature through small scale clearfelling and scrub clearance. Further work will be required to maintain Favourable condition, all of which is detailed in the table in Section 3. The quality of the current habitats is not the highest in terms of marram on shifting dunes, but the planned management works will aim to improve this in the medium to long term.

Sand Dunes (RAMSAR)

This feature is recorded as Unfavourable Declining, with pressures listed as both over and under grazing and burning. The FES managed land is a relatively small piece of a large sand dune complex within the SAC, which covers both the Morrich More area and dune systems to the south and west of Dornoch and around the mouth of Loch Fleet. Given the work already undertaken, and that proposed within this plan, we would expect the condition on the NFE to improve significantly. Given the Favourable condition for this habitat within the Morrich More SSSI we would also hope that these management works will see an improvement of the Feature Condition on the NFE for the Dornoch Firth and Loch Fleet RAMSAR site. As described above, sand dunes can be found within the forest block, with the best and most important being to the north and east of the block (those that have already been cleared of trees).

Section 3 Pressures and proposed actions

Table 3 Pressures and proposed actions

Site Type	Feature description	Pressures	Proposed action	Timescale	Location Map highlighting work & other key limiting factors
SSSI	Quaternary of Scotland (Geology)	Tree and scrub growth blocking views from the public road and growing within the meltwater channels	Felling, chipping and control of regeneration was undertaken in 2007 and a small amount of follow up was delivered in 2013. Further work will take place as and when required on the cleared areas and the areas that have never been planted.	Throughout the life of the Land Management Plan as and when required.	Detailed analysis on the landscape context can be seen in Appendix 12 – 6 Meltwater Channel Concept. – 7 Meltwater Channel Proposals and App 12 – Meltwater Channel Analysis. The area of Struie Channels SSSI can be seen on Map 3 – Key Features – Environmental. Map 6 Future Habitats (c) also shows the open areas, although only the areas that have never been planted and those cleared already will be kept open. A lower percentage of native woodland will be tolerated on areas previously planted.
RAMSAR	Sand Dunes	Under grazing	Although this pressure does not specifically relate to FES landholding, if left unchecked it could lead to problems in the future, particularly with invasive scrub and tree regeneration in the restored areas. We propose to fence the felled areas and graze with an appropriate number of livestock, ideally 30-40 sheep. Alternative stock may be looked at it sheep are not available.	Grazing would be from mid April to late September and would take place annually assuming both SNH and FES were happy with the outcomes. The likely timescale for this is for fencing to take place in late 2014 or early 2015, with grazing from 2015 onwards.	On the open areas to the north and east of the Morrich More block on Map 6 Future Habitats (a). Constraining factors may be the availability of water and suitable stock. A grazier would be identified prior to fencing.
RAMSAR	Sand Dunes	Presence or changing extent of invasive species	Although this pressure does not specifically relate to FES landholding, there have been issues with tree and scrub regeneration on the restored sand dunes. We plan to remove brash from recently felled areas to reduce potential problems associated with nutrification increasing invasive growth. Future work will then aim to control any invasive species to allow native dune species to recolonise. We would also propose to fence the dunes and graze them to help control any future growth of invasive scrub, natural regeneration of trees and stop a small number of grass species that would not normally be associated with good dune habitat from dominating.	Winter 13/14	On the open areas to the north and east of the Morrich More block on Map 6 Future Habitats (a).

Section 4 Operations within the Land Management Plan that could impact on the designated features on the NFE
Table 4 Operations within the LMP that could impact on features on the NFE

Operation Type	Detailed description of operation and method	Mitigation measures to be applied	Timing	Map reference & other relevant comments
Clearfell of coupe 5 and restock of coupes 3, 4 and 5.	Standard mechancial felling of trees by harvester and transport to roadside by forwarder for onwards transport by lorry. Groud preparation for replanting using a digger, with planting done by hand. If not done sensitively, this could damage the Meltwater Channels.	Wherever possible, machinery will not touch land that has not previously been planted. There may be one or two small isolated patches that need to be harvested, but care will be taken to avoid damage to the channels by using branches and tops under the machinery.	Through the life of this Land Mangement Plan	Map 7a CSM6.
Operations within Morrich More forest block, eg thinning and removal of brash from felled dunes.	Standard mechanical thinning by harvester and transport to the roadside by forwarder. Removal of brash by digger and dumper or forwarder. Brash will be deposited within the areas of standing trees as deadwood.	The areas of important flora, primarily variegated horsetail (*Equisetum variegatum*), will be marked off during operations and avoided with heavy machinery. These have largely been mapped in the confidential Conservation Extension in GIS, although these areas will be remarked on the ground as and when required and site survey will look for new areas.	Throughout the life of this Land Management Plan	Morrich More forest as shown on Map 1 Location & Context
Clear felling of red phase coupes and thinning within the Land Management Plan in the main Morangie Block and outlying Scotsburn Blocks.	Standard forest operations to fell trees and remove to the roadside with harvester/forwarder, either removing all or most of the trees in the red phase coupes, and any subsequent amendments, and as part of the thinning programme in these areas (also including haulage of timber). This could impact on the capercaillie within the area, not just in the SPA.	All work will be risk assessed by the FD Environment Team through the work plan and business plan processes. This will also be influenced and informed by annual capercaillie counts and brood counts. Where there is a risk of disturbance to capercaillie, work will be timed to avoid the key periods for them. FC Guidance Note 32 and caper BAP Group guidance on Avoiding Disturbance to Breeding capercaillie.	Generally no op's to take place late March to late July within these areas unless it is clear that there are no caper present.	Refer to Map 5 Management Coupes (a, b and c) for the red phase clearfell coupes and on Maps 7a and 7b, CSM6.
Creation of new forest roads as follows: West Strathrory Spur, Wallace Hill Spur and Badachonacher Spur.	Felling (if required) and creation of new roads by flattening of a base and then importing quarried material to create a new road suitable for timber haulage. This could impact on the capercaillie within the area, not just in the SPA.	All work will be risk assessed by the FD Environment Team through the work plan and business plan processes. This will also be influenced and informed by annual capercaillie counts and brood counts. Where there is a risk of disturbance to capercaillie, work will be timed to avoid the key periods for them. FC Guidance Note 32 and caper BAP Group guidance on Avoiding Disturbance to Breeding capercaillie.	Generally no op's to take place late March to late July within these areas unless it is clear that there are no caper present.	Maps 7a and 7b, CSM6.
Restocking and other machine work or operations within the main Morangie Forest area and the outlying Scotsburn Blocks (eg roads and recreational facilities maintenance, control of non-native invasive species).	Maintenance of recreation facilties and roads which could involve lorries, diggers and other heavy machinery. Environment work to control invasive species, eg non-native regeneration with chainsaws and rhododendron control. This would also include any other operations within these forests. This could impact on the capercaillie within the area, not just in the SPA.	All work will be risk assessed by the FD Environment Team through the work plan and business plan processes. This will also be influenced and informed by annual capercaillie counts and brood counts. Where there is a risk of disturbance to capercaillie, work will be timed to avoid the key periods for them. FC Guidance Note 32 and caper BAP Group guidance on Avoiding Disturbance to Breeding capercaillie.	Generally no op's to take place late March to late July within these areas unless it is clear that there are no caper present.	Work could be anywhere within the blocks highlited on Map 1 Location & Context.

Section 5 Operations within the Land Management Plan or aspects of the National Forest Estate within the FDP that could impact on Designated Sites adjacent to the NFE

Table 5: Operations that could impact on Designated Sites adjacent to the NFE

Operation Type / Aspect of forest	Detailed description of issue or operation	Proposed action &/or mitigation	Timing	Map reference & other relevant comments
Non-native regeneration from Leinster Park block into Pitmaduthy Moss SSSI/SAC	Regeneration of non-native conifers from the Leinster Park block could cause problems for the SSSI/SAC at Pitmaduthy.	The forest plan aims to remove the non-native conifers from this block and promote Low Impact Silvicultural Systems with scots pine and native broadleaves. Felling that has already taken place removed the lodgepole pine, which had the highest potential to invade the SSSI/SAC	Recent felling will be allowed to regenerate with native species and coupe 24 will be removed in the second phase of the LMP. This coupe is primarily small, checked trees with some larger sitka spruce and douglas fir. This operation will, along with long-term selective thinning, remove all of the non-native conifers from this forest block.	Refer to Map 1 Location & context, Map 3 – Key Features – Environment, Map 5 Management Coupes (a) and Map 7b CSM6.
Disturbance to breeding species within the Dornoch Firth & Loch Fleet RAMSAR and SPA and Morrich More SSSI designated sites	Standard forest operations could impact on the success of the breeding birds within these designated sites (and those outwith that area associated with them, eg Ospreys) if not managed correctly.	All work will be risk assessed by the FD Environment Team through the work plan and business plan processes. This will also be influenced by discussions with the FES Species Ecologist, local members of the Highland Raptor Study Group, RSPB and SNH.	Where appropriate, work will avoid the breeding season for these species (roughly the start of April until late August).	Map 3 – Key Features – Environmental shows the designated sites in question and maps 7a and 7b CSM6 shows the felling and restock coupes due and the likely new roads to be constructed (although this issue takes any operation on the NFE into consideration).

Section 6 Appropriate Assessment/s undertaken on work contained within the FDP

An Appropriate Assessment for this Land Management Plan in relation to the Morangie Forest SPA is attached in Annex 1. FCS will continue to consult with the FCS Species Ecologist, Capercaillie BAP Steering Group Project Officer and SNH on any proposed changes to the LMP as per the tolerance table included, and a further Appropriate Assessment will be undertaken if required.
No Appropriate Assessment has been undertaken for the Dornoch Firth and Morrich More SAC or the Dornoch Firth and Loch Fleet SPA as we feel that this is not required given the small percentage of Designated Land that we manage within this and the positive work already undertaken on the Sand Dune feature (which makes up a very small part of this large scale habitat in the Dornoch Firth area).

Section 7 Approvals, agreements & signatures

I confirm that the above management plan which covers the sections of Designated Sites shown in Table 1 of this Designated Site Planning Document in the Land Management Plan for Easter Ross contains the necessary detail, content and mitigation measures to comply with the statutory requirements contained within the Nature Conservation (Scotland) Act 2004 and in particular in relation to Part 2, Chapter 1, Section 14 (d), which covers consents via an agreed management plan (i.e. "SNH's consent under section 13 is not required in relation to carrying out an operation of the type described in subsection (1) of that section – …….(d) in accordance with the terms of a management agreement between SNH and the public body or office-holder carrying out the operation").

SNH Signature …… Date ……..

SNH Name ……..

SNH Job Title ……..

Address……..

Email ……..

Contact telephone number ……..

FCS has a corporate requirement under UKWAS (2nd edition) and under the FCS Framework Document for FES (2010) to manage all designated sites in accordance with plans approved by the statutory authority, I therefore sign below to approve the contents of this plan in relation to the Designated Sites listed in Table 1 of this Designated Site Planning Document that fall within its boundary on the NFE.

SNH Signature …… Date ……..

SNH Name ……..