

DEER MANAGEMENT PLAN FOR THE SOUTH WEST ROSS DEER MANAGEMENT AREA 2015-2020



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A

INTRODUCTION:

A1.1 The South West Ross Deer Management Group area includes in effect all that land between Applecross and Achnasheen, bounded to the north by Loch Torridon and the roads between Shieldaig, Kinlochewe and Achnasheen (A896 and A832) and to the south by Loch Carron and the A896 from Lochcarron village to Achnasheen [Map 1]. Total area within the South West Ross Management Area (excluding towns and villages) is assessed as 62340 ha. The area includes land in some 17-18 main ownerships as well as land owned and managed by Forestry Commission Scotland. Deer Management and associated activities of individual landholdings are coordinated through discussion within the South West Ross Deer Management Group [SWRDMG], which meets formally twice a year (although other meetings may be called as required and much business is transacted via email). All member Estates attempt to have a representative present at all meetings; meetings are also attended by representatives from the Forestry Commission, SNH regional and wildlife staff and local community interest groups by invitation. The Group's constitution is appended to this Plan.

A1.2 The Deer Management Plan adopted by SWRDMG in 2002 was updated in 2009 for a further 5-year period and has recently expired. Following assessment of Group activities and matters addressed within the Group Plan in collaboration with SNH, SWRDMG has determined to update and revise the former Plan and at the same time bring it into line with the Benchmark for Deer Plans. SWRDMG endorses the Government's Code of Practice on Deer Management and the ADMG's Principles of Collaboration in relation to Deer Management.

A1.3 After extensive consultation this Plan is presented as an agreed Deer Management Plan for a five year period from 2015-2020. The Plan has been prepared to integrate individual Estate Management Plans, and Long-Term Forest Plans with Group-level commitments and to ensure delivery of both private and public interest.

A1.4 In any Management Area it is impossible to find a period of absolute stasis with all future factors influencing management decisions fully resolved. Indeed in the period of the previous Plan there have been a number of changes of land-ownership and/or objective. This Plan therefore is inevitably prepared against a background context with some remaining 'unknowns' and should not be seen as set in stone. Rather the Plan is seen as indicative, and must allow room for flexibility as circumstances may change.

A1.5 In any event, management for the future is not a precise science. Active management must be accompanied by close monitoring of the condition of deer populations and habitats in order to assess whether management decisions taken are indeed delivering objectives sought. Where such monitoring suggests that objectives are not being delivered as expected, some minor adjustments to proposed policies and action plans may be necessary to meet desired targets.

A1.6 Annual review of progress and approval of any minor changes in policy in the light of altered circumstances, or in response to results of ongoing monitoring programmes will be made at each Annual General meeting of the Management Group. After this time, the Plan will undergo full review with an update for the following 5 year period.

A1.7 In development of the actual Management Plan which follows, the Group employed Professor R.J.Putman to collate information on deer populations and habitat condition, to assist in establishing clear definition of objectives as well as help focus discussion on future possible management options within individual Estates or the wider Management Group Area. Information was sought from all estates and from SWRDMG records on deer counts for the different estates or other land-holdings, recorded calf-hind ratios and cull data over the period since the last Group Plan.

A1.8 Detailed consultations were undertaken with individual landowners, or their managing agents, as well as all stalkers to establish

- i) current deer numbers and distribution on their own estates; movement patterns within Estates and between adjacent properties; past and present management policy and procedures;
- ii) current patterns of land use, plans and expectations for the future, as well as exploring aims and objectives of management for their deer for the future.

A1.9 Additional consultation was carried out with other interest groups such as Scottish Natural Heritage Regional staff and Forestry Commission for Scotland as well as local community groups (such as the Kirkton Heritage Woodland Group) to establish their interests and aspirations for future management of the area.

A1.10 Finally, independent assessments were also undertaken of the condition of the deer herds and the condition of the habitat during a series of visits to all the estates by RP between September and December 2014.

A2. The South West Ross Deer Management Area:

A2.1 The South West Ross Deer Management Group area includes in effect all that land between Applecross and Achnasheen, bounded to the north by Loch Torridon and the roads between Shieldaig, Kinlochewe and Achnasheen (A896 and A832) and to the south by Loch Carron and the A896 from Lochcarron village to Achnasheen [Map 1]. It includes land in some 17-18 main ownerships as well as land owned and managed by Forestry Commission Scotland. Much of the area lies within the Wester Ross National Scenic Area, whilst the area also includes a number of designated as of conservational importance (as SSSI or SAC). The South West Ross Management Area is also wholly included within the area recently nominated for recognition as UNESCO Biosphere Reserve.

Geology:

A2.2 The geology of Wester Ross is relatively simple for the size of the area as a whole; a simple overview taken from the Wester Ross National Scenic Area Working Paper (2002) presents the area as "sedimentary Torridonian sandstone overlying Lewisian gneiss with shattered Cambrian quartzite caps on the high peaks". The Moine Thrust has also had an influence on the eastern and southern parts of the area in the exposure of Moine schists and a notable outcrop of Durness limestone at Rassal.

A2.3 The bedrock is readily apparent throughout the area as it appears as exposures through the thin vegetation cover in the moorland or on the exposed terraces of high ground cliffs. There are localised intrusions of basalt and dolerite, while the actions of the last Ice Age have left a scatter of superficial deposits of moraine and undifferentiated drift. The associated soil types are peats, peaty gleys, peaty podzols and peaty rankers of the Torridonian association.

Vegetation:

A2.4 An overview of the vegetational fabric within the MDMG area is provided by Map 2 [Land Cover Scotland], although this offers only limited resolution. In practice, much of the area is relatively homogeneous. Where peat accumulates on shallower slopes, the vegetation is dominated by extensive tracts of deer grass/cotton grass blanket bog (*Scirpus* (*syn. Trichophorum*) *caespitosus* - *Eriophorum vaginatum* blanket mire; NVC M17). The most obvious species are deer grass and *Eriophorum*, with ling heather (*Calluna vulgaris*) and cross-leaved heath (*Erica tetralix*). In places where the vegetation is relatively undisturbed there may be widespread development of *Sphagnum* moss and other bryophytes.

A2.5 On better drained soils of steeper slopes or stony tops, the abundance of both bell heather and ling tends to increase and blanket mire gives way to wet heath (*Scirpus caespitosus* - *Erica tetralix* wet heath M15). Superficially similar to M17 this is characterised by the absence of cotton grass and the substantially thinner peat layer. Drier areas are often associated with an increased abundance of purple moor grass (*Molinia caerulea*), dominance of *Calluna* within the dwarf shrub assemblage, and good development of blaeberry (*Vaccinium myrtilis*). In wetter areas a more diverse community may develop containing a number of species of sedge (*Carex spp.*), bog asphodel (*Narthecium ossifragum*), *Drosera* species and locally dense stands of bog myrtle (*Myrica gale*). Total area of carbon- rich peatland is assessed by Land Cover Scotland [Map 2] as 45107 ha.

A2.6 More exposed areas with thinner soils and high plateaux support a more montane vegetation type with hummocks of *Racomitrium* moss and *Cladonia* lichens, and widespread development of clubmoss (*Lycopodium*), while the higher tops support montane or subalpine assemblages [7296 ha].

A2.7 There is clearly considerable local variation on this basic theme. In all areas, wetter flushes, particularly on the lower slopes are associated with the development of small patches of pure *Molinia* grassland (*Molinia caerulea*, M25), while the baser-rich soils of the Durness limestone exposure at Rassal or the Moine schists of the eastern end of the Management Area (Coulin, Ledgowan) support distinct *Agrostis/Festuca* greens.

A2.8 In many parts of the area are relict patches of native broadleaved woodland (largely birch (*Betula spp.*), rowan (*Sorbus aucuparia*) but with holly (*Ilex aquifolium*), aspen (*Populus tremula*). Commonly these fragments are restricted to ravines and stream gorges or other very steep slopes which are less accessible to grazing animals, but there are more extensive areas in places which when protected from grazing/browsing, have shown significant consolidation [Map 2 and Map 3 from the National Forest Index]. These natural relict areas have been further augmented by numerous other blocks throughout the Management Area specifically replanted with native broadleaves of local genetic stock. Recent plantings of both commercial forestry and native woodlands, funded under various past grant schemes are represented in Map 4.

A2.9 Of additional note is an area of mature Ash woodland (*Fraxinus excelsior*) at Rassal (OS grid reference: NG 860440) believed to be among the most northerly in Europe, and unique within the Highlands as the largest ashwood on limestone; while the nearby Allt nan Carnan gorge (895405) contains a range of woodland types from calcareous ash-wych elm (*F. excelsior* - *Ulmus glabra*) associations at its lower end to more acid birch-rowan at its northern end. Both areas are designated as Sites of Special Scientific Interest (SSSI) (See paragraphs A3.1-A3.20 for full details of all designated sites).

A2.10 Of similar significance are the extensive relict fragments of Caledonian pine forest (*Pinus sylvestris*, var. *scotica*; W18) in the northeast of the Management Area. The largest areas of this, covers the northern end of Ben Shieldaig, but significant fragments also remain at Ben Damph and Coulin as also within Forestry Commission woodlands at Achnashellach. Both the Ben Shieldaig and Coulin pinewoods are designated as SSSI and parts of these areas, as well as parts of the birchwoods on Ben Damph fall within the larger Loch Maree Complex SAC.

A2.11 Part of the reason for designation of these areas is in recognition of the diversity of lichens, mosses and fungi supported. Indeed, in contrast to the relative paucity of its vascular flora, South West Ross has a rich diversity of lower plants. A survey of mosses and liverworts at Rassal in August 2000 recorded 200 bryophyte species within the SSSI (Rassal NNR Annual Progress report 1999-2000) while other survey work has also indicated that the limestone grasslands of Rassal are of international

importance for *Hygrocybe* fungi (waxcaps); a total of 27 different species were recorded on the site in a single visit.

Mammals and Birds:

A2.12 Notable species of birds recorded as resident and/or breeding within the Management Area include Golden eagle (*Aquila chrysaetos*), buzzard (*Buteo buteo*), peregrine (*Falco peregrinus*), merlin (*Falco columbarius*), red-throated and black-throated diver (*Gavia stellata*, *G. arctica*), Greenshank (*Tringa nebularia*), Golden plover (*Charadrius apricarius*), Wood sandpiper (*Tringa glareola*), Siskin (*Carduelis spinus*), twite (*Carduelis flavirostris*), redpoll (*Carduelis flammea*) and Scottish crossbills (*Loxia curvirostra scotticus*). (All species listed appear on Schedule 1 of the Wildlife and Countryside Act and are listed in Annex 1 of the EC Birds Directive).

A2.13 Pine martens (*Martes martes*) and European otters (*Lutra lutra*) are present throughout the Management Area. Water voles (*Arvicola terrestris*) have been recorded in the past at high densities in some sites but the current status of these populations is unknown.

A2.14 There are significant populations of red deer (*Cervus elaphus*) throughout the area, which provide the main grazing impact over much of the hill ground and also the major sporting interest. Roe deer (*Capreolus capreolus*) are also widespread but at lower density and with a discrete, patchy distribution. Sika deer (*Cervus nippon*) are increasingly being reported in recent years

Communities and Species of Special Interest:

(Data are extracted largely from Scottish Natural Heritage Management Statements for designated sites within the area)

A2.16 As already noted the Management Area contains a number of communities and species of special interest to which close consideration must be paid in formulating management plans and priorities. Of particular note are

- the fragments of native broadleaved woodland: fragments of birch, rowan, aspen woodland scattered throughout the area and particularly associated with steep gullies and burns
- the mature ashwoods of the Durness limestone at Rassal and associated limestone habitats: limestone grasslands, alkaline fens, calcareous springs and willow scrub.
- the ash-wych elm, birch-hazel assemblages of the Allt nan Carnan Gorge in Lochcarron and
- the Caledonian pine and pine-birch fragments, most notably of Ben Shieldaig and Coulin
- the dwarf juniper heath of Beinn Bhan (Applecross), considered the most southerly, and high altitude example of this community in mainland Britain.

A2.17 The area supports some 150 species of vascular plants. Notable species here include the Caledonian pine (*Pinus sylvestris* var. *scotica*) creeping lady's tresses (*Goodyera repens*), dark red helliborine (*Epipactis atrorubens*), dwarf juniper (*Juniperus communis nana*), alpine bearberry (*Arctous alpinus*) and the upland rock sedge (*Carex rupestris*). Nationally rare species of non vascular plants include the largest populations within the UK of the lichen *Siphula ceratites*, as well as the lichens *Leptogium saturninum*, *Pannaria ignobilis*, the liverwort *Jungermannia leiantha*, and the nationally scarce lichens *Arthonia leucophellaea*, *Cavernularia hultenii*, *Chrysothrix chrysophthalma*, *Buellia erubescens*, *Conotrema homalotropum*, *Lecidea ochrococca*, *Thelotrema subtile*, *Platismatia norvegica*, *Chaenotheca chrysocephala*, *Wadeana minuta* and *Stenocybe bryophila*.

A2.18 The area is of regional importance for the Red Data Book beetle *Harmirius indulatus* and the northern emerald dragonfly *Somatochlora arctica*, the Red Data book hoverfly *Callicera rufa*, and also of importance for the nationally scarce dragonfly species *Aeshna caerulea*, *Leucorrhinia dubia* and the beetles *Rhagium inquisitor* and *Xylita laevigata*.

A2.19 As above: notable species of birds recorded as resident and/or breeding within the Management Area include Golden eagle (*Aquila chrysaetos*), buzzard (*Buteo buteo*), peregrine (*Falco peregrinus*), merlin (*Falco columbarius*), red-throated and black-throated diver (*Gavia stellata*, *G. arctica*), Greenshank (*Tringa nebularia*), Golden plover (*Charadrius apricarius*), Wood sandpiper (*Tringa glareola*), Siskin (*Carduelis spinus*), twite (*Carduelis flavirostris*), redpoll (*Carduelis flammea*) and Scottish crossbills (*Loxia curvirostra scotticus*). (All species listed appear on Schedule 1 of the Wildlife and Countryside Act and are listed in Annex 1 of the EC Birds Directive). The area also supports locally significant populations of pine marten, European otter and water vole.

Designations:

A3.1 Any plans for future management within the area must take full account of the fact that large parts of the area are separately designated as of particular conservation value/importance.

A3.2 The bulk of the South West Ross Deer Management Area falls within the Wester Ross National Scenic Area and in addition a large part of the more northern area (including sections of Ben Shieldaig, Ben Damph and Coulin Estates), falls within the Loch Maree Complex Special Area of Conservation (SAC). 5 sites within the area additional to these already mentioned are designated as Sites of Special Scientific Interest (SSSI): Shieldaig Woods, Coulin Pinewoods, Doire Damh (an area of birch/sessile oak woodland on the shores of Loch Damph) Rassal, and the upland area of Beinn Bhan on Applecross. Parts of Coulin Estate (The Corrie of a Hundred Hillocks, Coire a' Cheud-Chnoic, and the lower slopes of Sgurr Dubh) also fall within the separate Torridon Forest SSSI. [Map 5; designated sites]

A3.3 Designated sites in the group area may be more formally summarised as

- i) those falling within the Loch Maree Complex SAC (including Shieldaig Woods, Doire Damh, Coulin Pinewood and Torridon Forest, already designated SSSI)
- ii) Rassal SSSI and SAC
- iii) Allt nan Carnan Gorge SSSI, and
- iv) Beinn Bhan SSSI and SAC, Applecross.

A3.4 Clearly these designations and the accompanying management agreements may in some cases markedly affect the options available for management of deer or vegetation; copies of the Notifications and the Management Statements for each site are held by the appropriate Estates, and in the local SNH offices at Kinlochewe. Full Site Management Statements for all these sites are also available at <http://gateway.snh.gov.uk/sitelink/> [The current condition of these different sites and the features for which each is designated, is reviewed separately from paragraph A5.4- A5.14]

A3.5 310.4 ha of **Doire Damh** on Ben Damph Estate have been designated an SSSI since 1985 and are now included within the Loch Maree Complex SAC. Doire Damh woodland is considered one of the best examples in the North West Highlands of a sessile oak-birch wood on rich soils. The open woodland occupies steep west facing slopes, with the canopy being dominated by birch with scattered hazel, rowan, oak and holly. The amount of woodland present within the SSSI is actually quite small, since trees are relatively sparsely distributed over its area. The northern part of the wood in particular supports a diverse woodland and grassland flora with locally uncommon woodland plants such as wood false-brome (*Brachypodium sylvaticum*) and mountain melick (*Melica nutans*), along with grassland species including common twayblade (*Listera ovata*) and greater butterfly orchid (*Platanthera chlorantha*).

A3.6 The **Shieldaig Woods** SSSI embraces two extensive and extremely significant areas of native woodland on Ben Shieldaig. To the north is an extensive area of upland birch woodland (Mheallaidh Wood: downy birch with sessile oak, also including some rowan and scattered pines) on the slopes of

Sron an Fhithich behind and to the east of the Shildaig township. On the west face of the massif above Loch Dughaill is a large area of Caledonian pine (Coille Creag-loch), considered to be the most Westerly area of Caledonian Pine in Europe; the pines of Ben Shildaig are of the distinctive Wester Ross type, believed to have maintained a continuous presence in the area for 8000 years. Both woodland sites have been designated within a single SSSI [the Shildaig Woods SSSI] since 1984 and are included in the more recent Loch Maree Complex SAC.

A3.7 The **Coulin Pinewoods SSSI** includes two distinct areas of Caledonian pinewoods within Coulin Estate (to the east of the Management Area towards Kinlochewe). There are two areas of remnant Caledonian pine, around Loch Clair and Allt na Luib, and further south around Easan Dorcha. The area around Loch Clair also falls within the much larger Loch Maree Complex SAC, which also includes the Beinn Eighe and Torridon pinewoods. Like those of Ben Shildaig the pines of all these areas are of the distinctive Wester Ross type and together these northern blocks form a significant resource of Wester Ross pine, part of a wider swathe of extending westwards through Ben Damph Estate to the Ben Shildaig (above)

A3.8 The SAC designation only covers the pinewoods in the vicinity of Loch Clair and the Allt na Luib and does not follow the SSSI designation into the Easan Dorcha pinewoods. These pine woodlands of the south of Coulin are believed to be more closely related genetically to those of Achnashellach in the south.

A3.9 Coulin forest is considered to be one of the richest pinewoods in Scotland for lichens, with 115 distinct species being recorded. The lichen community is well-developed and includes the nationally rare species *Siphula ceratites*; the rare liverwort *Jungermannia leiantha* is also present in its only known Scottish site. 20 species of fungi were recorded in the Easan Dorcha pinewood alone in a survey carried out by SNH in 2000; these included two Red Data Book species *Cortinarius scaurus* and *Ombrophila violacea* (letter to Factor, Coulin Estate, from E.M.Holden, for SNH; 8/3/2001).

A3.10 **Rassal** contains the largest exposure of Durness limestone in Wester Ross. The underlying geology gives rise to a diversity of habitats: limestone pavement, limestone grasslands, and flush and mire communities as well as the most northerly example of ash woodland in the UK. Two nationally scarce plant species, dark-red helleborine (*Epipactis atrorubens*) and narrow-leaved helleborine (*Cephalanthera longifolia*) occur in the ash woodland, along with a wide variety of typical woodland species, such as primrose, wild strawberry (*Fragaria vesca*) and sanicle (*Sanicula europaea*).

A3.10 The lichen flora of Rassal is of particular interest and the ashwood supports the largest populations in the British Isles of *Leptogium saturninum* (considered Vulnerable in the Red Data Book classification scheme) and *Wadeana minuta* (nationally scarce). Rassal is also notable for its population of *Pannaria ignobilis*, which is nationally scarce and categorised as vulnerable in the Red Data Book. In total 8 nationally rare and 46 nationally scarce species occur on the site. Rassal supports a rich, and internationally important, flora of mosses and liverworts, and 220 species have been recorded. Of these, two are nationally rare and seventeen are nationally scarce. Considered of particular importance for mosses and liverworts are the woodland at Coille Dhubh, the heaths on the north face of Sgurr a' Gharaidh, and gorges of the Allt a' Ghuibhais and Allt Mor.

A3.11 On the rocky limestone exposures, three nationally scarce plant species occur: mountain avens (*Dryas octopetala*), whortle-leaved willow (*Salix myrsinites*) and rock sedge (*Carex rupestris*). The wetter flushes and mires support a number of species including yellow saxifrage (*Saxifraga aizoides*), broad-leaved cotton grass (*Eriophorum latifolium*) and black bog rush (*Schoenus nigricans*).

Recent survey work has also indicated that the limestone grasslands of Rassal are of international importance for *Hygrocybe* fungi (waxcaps) on account of their rich diversity at the site; a total of 27 different species were recorded on the site in a single visit.

A3.12 Of additional note is an area of mature Ash woodland (*Fraxinus excelsior*) at Rassal believed to be among the most northerly in Europe, and unique within the Highlands as the largest ashwood on limestone. The first comprehensive survey of the Rassal SSSI in 1999 recorded a total of 365 taxa for the SSSI as a whole and 304 within the Ashwood. These included 8 nationally rare and 6 nationally scarce species with two Red Data Book species recorded on ash trees (*Leptogium saturninum* and *Pannaria ignobilis*) (Rassal NNR Annual Progress Report 1998/99).

A3.13 In surveys in 2001 and 2003, the ash woodland within the Rassal SSSI (effectively that area within the NNR) was assessed as being in favourable condition; it is noted that most of the ashwood within the SSSI is now fenced and that the woodland has expanded (albeit slowly) as the result of (slow) natural regeneration and some planting. However, other features within the woodland were less favourably considered; in her survey of the woodlands in 2001¹, Averis noted that much of the floristic diversity of the ground flora was being lost within enclosed areas due to undergrazing (and development of a dense, lank sward of coarse grasses outcompeting many herbaceous species), so there is clearly some tension here between the requirements for successful regeneration of woodland, and preservation of the rich ground flora and lichen communities. SNH have recently redesignated the woodland as wood-pasture and have agreed a Grazing Management Plan to maintain the site's broad range of conservation interests through controlled cattle grazing.

A3.14 The boundary of the Reserve was extended in 1967 to include a section of the Allt Mor Gorge, which supports good examples of ash and wych elm gorge woodland. In 1990, a fenced corridor linking the gorge woodland to the main ash-hazel wood of Rassal was established and included within the subsequent SAC.

A3.15 **Allt nan Carnan** is a wooded gorge approximately 3.5km in length, running north from the western end of Lochcarron village. The gorge cuts through rocks of the Moine schists which influence its woodland and ground flora. The site contains a range of native trees characteristic of the nutrient-poor acidic soils. The woodland in the lower gorge is classified as upland sessile oak woodland. Old oak woodlands (*Quercus petraea*) with holly (*Ilex aquifolia*) and hard fern (*Blechnum spicant*) are a rare habitat in Europe and are classified under Annex 1 of the EU Habitats Directive. Beech (*Fagus sylvatica*) is dominant in places, especially at the south end of the site, threatening the conservation status of this lower gorge. Other common species include birch, rowan, hazel, holly, aspen, alder and willows. Ash is patchy and locally abundant and wych elm is absent, in contrast to the more common association of base-rich woodlands elsewhere. The middle section of the site supports patchy hazel-birch woodland while the upper part of the site is sparse rowan-birch woodland. Generally, birch is dominant above the big bend with rowan, willow, hazel and alder also common. Oak, holly and beech are present but decline progressively upstream.

A3.16 The ground flora is characteristic of damp, shady conditions with little or no grazing pressure. These conditions also favour a rich and varied bryophyte and lichen community including a number of nationally scarce species. The rock faces and ledges in particular support an abundance of ferns and mosses. Very localised nutrient-rich rock bands provide conditions for a more varied flora. A number of plants with restricted distribution occur on the site (particularly in the lower gorge) including the nationally scarce pyramidal bugle (*Ajuga pyramidalis*) and intermediate wintergreen (*Pyrola media*).

¹ Averis, A. (2002) **Rassal, a survey of the proposed SAC**. Internal report to Scottish Natural Heritage, Kinlochewe.

A3.17 **Beinn Bhan** SSSI/SAC on Applecross is seen as a particularly good example of a Torridonian sandstone mountain in which high cliffs and deep corries are well-represented. It has a larger summit area compared to most of the sharp-ridged Torridonian hills and supports a greater representation of vegetation communities characteristic of exposed ground. A range of upland plant communities are present, including alpine and sub-alpine heaths, ledge vegetation dominated by tall herbs and types adapted to surviving amongst the acidic scree. The summit plateaux are dominated by alpine and subalpine heaths but on rocky ground close to the top of the main ridge there are examples of dwarf juniper heath. This community forms a mat, generally less than 10cm thick, where dwarf juniper and heather are especially frequent along with a distinctive oceanic moss and liverwort flora and the rare alpine bearberry. The Beinn Bhan juniper heath is particularly significant as one of mainland Scotland's most southerly and highest altitude examples, as well as one of the few examples on sandstone. **Scottish dwarf juniper heath**, is an Annex 1 habitat under the EU Habitats and Species Directive and is considered to be of national importance at this site.

A3.18 Of major additional interest are the tall herb communities on ledges inaccessible to grazing animals. One of the most impressive is Ratcliffe's Ledge in Coire na Poite. This huge, sloping ledge is over 200m long and around 45m wide and supports a dense and luxuriant growth of ferns, and tall herbs in patches where base-rich seepages occur. The species-rich community includes locally notable species such as alpine saw-wort and dwarf cornel. On other parts of the cliffs base-rich springs and flushes support base-loving mosses, including one nationally scarce species. The patches of tall herbs on the enriched soils correspond to the **eutrophic tall herb community**, which is an Annex 1 habitat under the EU Habitats and Species Directive and is considered to be of national importance at this site.

A3.19 Finally, screes form an important habitat for pioneer species and frost and grazing sensitive species. The slopes below the corrie cliffs are mostly acidic scree, with patches of herb-rich grassland. These communities are similar to those located on the cliff ledges. Elsewhere, shady block screes support good examples of dwarf shrub heath dominated by heather, bilberry and crowberry. The screes also support late snow bed communities in which parsley fern is abundant.

A3.20 Designated features of the site include Upland assemblage, Alpine and subalpine heaths, Tall herb ledges, Acidic scree, Plants in crevices on acid rocks, Dry heaths, Wet heathland with cross-leaved heath and Montane acid grasslands

Group Membership and Deer Populations:

A4.1 Estates included within the core SWRDMG area and covered by this Plan are as below:

Areas presented are those provided by Estate records; these do not always coincide with planar areas assessed by SNH

Applecross Estate [approx. 26,000 ha]; owned by The Applecross

Trust, with stalking leased to and managed by Deer Management Consultants Ltd.

Achnashellach [approx 6000 ha, with c.2,000 ha within the SouthWest Ross Management Area]

owned by Major M.T.H. Wills and managed by Captain Nick Wills

[area within the SW Ross Group Management area assessed by SNH as 3200 ha]

Ardoch (50 ha) owned and managed by Mr Kurt Larson

Ben Damph Estate [6000 ha.]; owned by the Ben Damph Partnership and managed

by Mr D.Gray

Ben Shieldaig [Estate estimate: approx 1950 ha; **SNH estimate 1736 ha.**]; owned by The Hon. Hugh and Mrs Tollemache

Couldoran Estate [2025 ha]; owned and managed by Mr. M. and Mrs A. Raeside.

Coulin Estate [9417 ha]; owned by the Hon P R Smith 1971 Settlement
Fionnaraich [1080 ha]; owned and managed by LtCol. W J. Fooks and Mr. J. Block
Kinlochdamp [1633 ha] owned by Major Mark Adams
Glen Mhor [1214 ha] owned and managed by Mr Andrew Cope
Kinloch Estate (1420 ha) owned and managed by the Kinloch Woodlands Charitable Trust (represented by Mr. R. and Mrs C. Munday)
Ledgowan Estate [c. 4860 ha. of which some 2850 ha. fall within the SW Ross Management Group Area; **SNH estimate 2838 ha**]; owned by Mr A.G. Simpson and managed by Mr J. Stevenson
Lochcarron Estate [c 3220 ha; **SNH estimate 3163 ha**] owned by the Strath Discretionary Trust and managed by Mr M and Mrs G. Pattinson.
New Kelso [**SNH estimate 1143 ha**] ; owned and managed by Mr S.S. Macdonald
Tullich Estate [964 ha] owned by the Hon Richard Curzon; stalking currently leased to Mr Tom Chetwynd.

A4.2 In addition Forestry Commission Scotland owns and manages a number of woodland blocks within the South West Ross Management area, notably at Achnashellach. Area of this North Achnashellach block is assessed as approx 524 ha

A4.3 A number of former Forestry Commission holdings have been sold into private or community ownership since 2009. These include

Reraig Forest: an area of 655 ha of former commercial woodland [235 ha] and associated open ground [420 ha] at North Strome has recently been sold by the Forestry Commission to Mr Charles Anderson.

Carronach: An area of 109ha of commercial coniferous forestry similarly sold to Mr Jim Gatwood.

Kirkton Woods: Sale has also be completed of the 86 ha forest block of Kirkton in Lochcarron to the Kirkton Woodland Heritage Group, a local community Group.

Comment on management of these additional holdings and their relationship within the SWRDMG area is also considered in this Plan and as noted, representatives of all groups as well as other relevant community groups are invited to Deer Group meetings.

A4.4 Total area within the South West Ross Management Area (excluding towns and villages) is assessed as 62340 ha.

Deer Populations

A4.5 Within the overall area covered by the Deer Management Group we may identify a number of clear subpopulations of open hill red deer. While stags may be more mobile, especially during the rut for most of the Management Area we may broadly define subclusters of Estates sharing the same biological population of animals, or at least for whom there is more regular exchange of both stags and hinds on a daily or seasonal basis. Unfortunately, Estate boundaries do not neatly coincide with the boundaries of these subpopulations and a number of Estates have discrete hefts of beasts which form part of different biological populations.

A4.6 Thus: populations of Coulin, Ledgowan, Ben Damph and Achnashellach (North) are effectively continuous; but Ben Damph and Achnashellach at least also show regular exchange of animals with Fionnaraich and New Kelso to the west. Fionnaraich and New Kelso also show some exchange with the lower ground of Tullich, but populations of the higher ground of Tullich are in general more closely linked with Glen Mhor, Lochcarron, Kinlochdamp and Couldoran to the west.

The northern part of Kinlochdamph in turn does link with the open hill ground of Ben Shioldaig, but numbers here are very low, as are those of the open hill ground of Kinloch. The bulk of Ben Shioldaig and also much of the ground at Kinloch are enclosed within fences designed for protection of woodland regeneration. This reduces movement, but there does remain some exchange between the two properties

A4.7 Both by geography and because of the lines of strategic fences, Applecross is largely isolated from other properties within the Management Area, although there may be some movement between the eastern corries of Beinn Bhan and Couldoran, and there is more major emigration of stags during the period of the rut.

A4.8 Members of the Group are well aware of these separate populations of deer and their movement and are committed to coordinating management in each area to ensure no conflict of interest and to deliver effective and integrated management across the entire population in each case.

Summary of Issues affecting Management within the Group Area:

A5.1 The Management Area as a whole includes a wide variety of land ownership and objective. A significant number of the Estates are in private ownership. Of these, in the majority of cases, deer are managed as a sporting asset, though in some cases alongside farming/livestock enterprises, and often alongside commercial forestry. Many of these private estates show in addition a significant commitment to programmes of habitat restoration and woodland creation; in some instances, sporting interests have become secondary to management for conservation or habitat enhancement.

A5.2 At a wider, landscape scale, a major axis still remains within the Group Area as a whole in relation to this changing balance of objective, with Estates (or parts of Estates) to the south and west primarily emphasising sporting management (South and Central Applecross, Couldoran, Kinlochdamph, Lochcarron, Tullich, Glen Mhor, Fionnaraich, New Kelso, Achnashellach, south Coulin), while those to the north and west have a heavier emphasis towards conservation objectives (North Applecross, Kinloch, Ben Shioldaig, northern parts of Ben Damph and northern parts of Coulin). In addition to more local problems of management that this plan must seek to address, this clear gradient in overall objective also imposes some overall strategic aims for the Group as a whole, in ensuring that management overall maintains an appropriate gradient in deer population density.

A5.3 Implicit within this zonation, a major factor ‘constraining’ management decisions in some cases, or ‘imposing’ different balance of *emphasis* in management, is the fact that many parts of the SWRDMG Area are of especial conservation value and thus designated as SSSI or SAC (e.g. A3.1-A3.20). Clearly in these areas also, the balance of management must be skewed towards protection or enhancement of designated features in line with statutory obligations - yet must be done in such a way to deliver those obligations while not compromising other objectives of the same Estate, or different objectives of its neighbours.

A5.4 Results of the most recent Site Condition Monitoring for all designated features are presented in detail in later sections of this report considering herbivore management on individual properties where these SSSIs or SACs occur. In overall summary [see also Map 6]:

A5.5 Doire Damh It is noted that the amount of woodland present within the SSSI is actually quite small, since trees are relatively sparsely distributed over its area. Most of the trees are mature but good regeneration has occurred in recent years over a large part of the site and the site was assessed during routine Site Condition Monitoring by SNH in 2006 as “favourable- maintained”.

A5.6 Shialdaig Woods

The most recent condition assessment within the SSSI in August 2013 found the birchwood feature to be in unfavourable condition; whilst there is good regeneration on the lower slopes of the birch wood there is less regeneration higher up the slope, with regeneration restricted to rocky outcrops. This appears to relate to both exposure, which results in a slow annual growth rate of trees, as well as excessive browsing. The condition of the pinewood feature was assessed at this time as favourable.

A5.7 Coulin Pinewoods

Levels of regeneration recorded by SNH during recent assessments within the SSSIs/SAC, particularly of Caledonian pine, consistently fail to reach national standards for 'favourable condition' - both around Loch Clair and in the area of pine at Easan Dorcha. Site condition monitoring carried out between 2003 and 2006, indicated that the native pinewood feature and the lichen assemblage features of the Coulin Pinewood SSSI were in an unfavourable condition, due mainly to continued presence of rhododendron and a lack of regeneration. As well as lack of regeneration of Caledonian pine itself, the lack of rowan regeneration is of particular concern for the lichen assemblage as the Lobarion lichen community is supported by mature rowans (SNH, 2010). The Statutory authorities (SNH, FCS) have reviewed with the Estate the Joint Agencies' position in February 2011 in an attempt to find appropriate solution and both ongoing and proposed future management at Coulin aim to address this requirement to restore favourable condition (paragraphs B6.35 et seq. and C6.1- C6.8 below). Levels of regeneration of birch and pine in enclosures outwith the SSSI have been considerably higher.

A5.8 Rassal

Formal assessment of deer impacts has been undertaken by SNH as part of routine Site Condition Monitoring. In surveys in 2001 and 2003, the ash woodland within the Rassal SSSI (effectively that area within the former NNR) was assessed (2001, 2003) as being in favourable condition; it is noted that most of the ashwood within the SSSI is now fenced and that the woodland has expanded (albeit slowly) as the result of (slow) natural regeneration and some planting. However, other features within the woodland were less favourably considered; in her survey of the woodlands in 2001, Averis noted that much of the floristic diversity of the ground flora was being lost within enclosed areas due to undergrazing (and development of a dense, lank sward of coarse grasses outcompeting many herbaceous species). SNH have recently redesignated the woodland as wood-pasture and have agreed a Grazing Management Plan to maintain the site's broad range of conservation interests through controlled cattle grazing.

A5.9 Within the wider area of the SSSI/SAC, routine Site Condition Monitoring carried out by SNH in 2004 and 2007 suggested that a number of designated features within the site - Montane Willow Scrub, Alpine and subalpine calcareous grasslands, Limestone pavement, and upland assemblages - failed to reach criteria established for "Favourable Condition" recording significant areas suffering from excessive impacts (grazing/trampling) from deer and/or livestock. A Collaborative Upland Habitat Management Plan [CUHMP] was agreed in March 2010 between the owner of Kinlochdamph, the owners of Lochcarron estate, and their crofting tenant, to address issues and concerns raised and deliver favourable condition within the site.

A5.10 The most recent SCM for the site has just been completed (2015). An advance draft summary of the surveyor's report has been forwarded by SNH. It notes (Wells, 2015):

"Most of the issues affecting Rassal tend to involve sheep rather than deer, and even then, heavily grazed areas tend to be quite localised. Overall, it appeared deer numbers seemed to be relatively low over much of the site, apart from the eastern sector of the SSSI where there is notable localised trampling of more sensitive habitats, such as H21 oceanic heath and M10 flushes. However, grazing impacts recorded were generally low or moderate and the trampling tends to be localised.

In common with most of the Highlands, deer numbers remain too high for montane willow to expand beyond inaccessible locations (the feature will 'fail' the assessment). One or two previously recorded willow sites in accessible locations could not be relocated, possibly due to being grazed out since the last assessment. On the plus side, a few 'new' populations were recorded, but all in areas inaccessible to grazing animals.

A5.11 Of the other features assessed during this cycle, calcareous grassland and limestone pavement will be classed as having failed the assessment. However, the former will be because of a variety of indicators relating to historically-prolonged grazing, mostly by sheep, and the latter because of a technical issue relating to inadequate indicator species options and also because many of the sample sites (derived from the 2008 HIA waypoints for this feature) were situated on 'marginal' pavement in the lower, western part of the SSSI (in many cases simply small rock outcrops rather than true pavement). Most of what I would regard as 'genuine' pavement, on the higher central and eastern sectors of the site were in good condition.

A5.12 Mainly because of the failure of these individual component habitats, Upland Assemblage will also have to be classed as having failed overall - although not by much. Of other components, it is mainly flushes and springs that show consistently high impacts - mainly from trampling. Heaths, calcareous rock and acid grasslands are mostly in good or reasonable condition across much of the SSSI."

A5.13 Site Condition Monitoring of the **Allt na Carnan Gorge** in 2001 also assessed this site as unfavourable, although this was largely due to presence within the SSSI of non-native tree species (mainly beech but also some larch and sitka spruce). It is noted that the intensity of grazing/browsing appears to have decreased in recent years (to 2001) allowing some expansion of the woodland into adjacent open ground.

A5.14 Beinn Bhan

Recent Site Condition Monitoring within the area of the Beinn Bhan SSSI/SAC of Applecross (2014) has suggested that herbivore impacts were now causing concern in relation to the alpine and subalpine heathland features, with twelve of the sample points scored within the alpine and subalpine dry heaths failing as a result of browsing impact recorded. Surveyors noted that the frequency of deer sightings, dung and signs of trampling suggested red deer as the principal herbivore causing these impacts; localised damage by heather beetle was also noted amongst subalpine dry heaths.

Woodlands and Commercial Forestry

A5.15 There are significant areas of native woodland within the South West Ross Management Area – with extensive areas of upland birchwood and Caledonian pine as well as the ashwoods and gorge woodlands of the Rassal and Allt nan Carnan SSSIs. Many of these areas fall within the designated sites listed at paragraphs A3.1 and A3.2; condition of these is primarily assessed through such routine Site Condition Monitoring within designated sites and is not separately monitored.

A5.16 An independent assessment of the condition of all native woodlands in Scotland was carried out between 2006 and 2013 (Native Woodland Survey of Scotland). The full data were published in February 2014 and are summarised in **Map 7**. We note that this map does not distinguish between impacts resulting from deer or sheep browsing and in many cases woodlands recorded as suffering heavy impacts lie within areas of low ground in crofting townships. Outwith those areas, within the majority of woodlands shown as having high or very high herbivore impacts, specific measures have already been undertaken or are proposed here to reduce herbivore impact [thus for example within Applecross, Kinlochdamph, Coulin]. It should also be mentioned that many commentators have challenged the methodology of this survey and particularly an inherent bias in analytical procedures which may tend to overestimate impacts attributed to deer rather than other herbivore species and the

severity of those impacts. Thus, Map 7 is seen as indicative only of areas of possible concern and is considered by the Group of value **primarily in identifying woodlands where more intensive monitoring may be required in the future.**

A5.17 Forestry Commission Scotland owns and manages a significant area of commercial forestry within the area both north and south of the A890 at Achnashellach and an number of other properties include significant areas of commercial planting [Map 3]. Many of these commercial blocks are approaching, or have reached maturity and it is a notable feature of the Group area that a number of private Estates are also currently in the process of felling, restructuring and/or restocking established woodland blocks. Thus there are commercial forest blocks in active management at Applecross, Coulin, Lochcarron, New Kelso and Ardoch as well as former Forestry Commission woodlands at North Strome, Carronach and Kirkton.

A5.18 There have also over the years been a very significant number of schemes for woodland creation both in North and South Applecross, Kinloch, Coulin Ben Damph, Kinlochdamph, Lochcarron and Glen Mhor amongst others [Map 4]. The bulk of these schemes have been undertaken through planting or natural regeneration within fenced enclosures so that herbivore impacts are restricted.

A5.19 The actual amount of new (or restored) fencing proposed make a significant difference to the overall area of available range in the Group area as a whole and in practice, other areas of woodland, previously exclosed, may have themselves now reached a stage where they are no longer vulnerable and they can be opened to deer (whether by deliberate policy or by default in fence maintenance).

Sustainability of Deer Populations

A5.20 Some concern has been expressed within the Group that overall (combined) quotas on Estates which have primarily sporting objectives have shown a significant increase over recent years (partly due to an increase of quotas on individual Estates; partly also to change in management objective of some Estates previously not managed primarily for sport, after recent change of ownership); such changes carry some risk that at least in some parts of the Management Area the combined stag quota may now be unrealistically high in relation to the actual capacity of the resident deer herd to sustain it. This was certainly a feature of discussions in development of the previous Group Plan.

A5.21 Over-harvesting in the past has also led to attempts by some Estates to boost recruitment by maintaining higher numbers of hinds on the ground; taken together with a decline in the number of stags, this has in some cases led to a further imbalance in population structure and in some case excessive hind densities.

A5.22 Figures below attempt to summarise the current status of populations in each of the main sub-areas and current harvest rates. In all cases figures are presented for counts and culls averaged over the period 2010-2014 where data are available

Population	Estimated Numbers			Average Combined Harvest		
	Stags	Hinds	Calves	Stags	Hinds	Calves
Applecross, Couldoran, Kinloch	464	627	197	72	110	[34]
Lochcarron, Tullich, Kinlochdamph, Glen Mhor	110	275	103	32	32	[12]
Ben Shieldaig, Ben Damph, Fionnaraich, New Kelso				26	25	[7]
North Achnashellach, Coulin, Ledgowan	[310]	[733]	[237]	61	45	[12]

A5.23 Unfortunately, while regular counts are available for the Estates of Cluster 1 [Applecross, Couldoran, Kinloch] and Cluster 2 [Lochcarron, Tullich, Kinlochdamph and Glen Mhor], few or no count data are available for Ben Damph, or Fionnaraich (Cluster 3) making the analysis proposed above not possible at the current time. In a similar way (Cluster 4), while regular count data are available for Achnashellach and Coulin Estates, no regular counts have historically been undertaken on Ledgowan; thus while provisional calculations are presented here for Cluster 4, it should be recognised that combined population (count) figures presented are based on only a single – and possibly unrepresentative – count for Ledgowan from Spring 2015

A5.24 In any assessment of stag harvest levels against stable populations of stags or hinds within the subpopulation area, it is also clear that stalking on some properties is strongly dependent on influx of stags during the rut, which may well come from outside the clusters identified. [Thus for example Kinlochdamph benefits from stags from Applecross to the west and also Ben Damph to the east]. This perhaps makes it more difficult to assess the true sustainability of stag harvests within any subpopulation area where culls may be subsidised by significant immigration from elsewhere.

What we may note however is that (assuming an average recruitment rates at around 33 calves per 100 hinds) hind culls in general have been rather on the low side in terms of maintaining stable populations of zero growth. This will be addressed within the current plan period.

A5.25 Discussions have taken place in development of this current Plan to attempt to ensure that appropriate data are collected in future to enable proper discussion at sub-Group level and adjustment of harvests to ensure that future combined stag harvests are sustainable within the different regions of the Management Area, although it is noted that in some cases this has been achieved thus far only through voluntary reductions of harvests on individual key Estates rather than a more general reduction in stag quota throughout affected areas. Collation and analysis of future count data [and appropriate population modelling](#) will also that future hind culls are targeted to maintain zero growth or, where appropriate effect some reduction in resident hind numbers.

Deer-Vehicle Collisions:

A5.26 There are relatively few traffic accidents involving deer within the area although occasional incidents are reported [Map 8]. Numbers of accidents have decreased significantly since the fencing of the A832 through Glen Docherty. Over the period 2001-2013 the majority of remaining incidents have been reported on that stretch of the A890 between the Strathcarron junction and Achnasheen; the number of accidents has also declined on that stretch of road since 2007 with 8 incidents reported between 2008 and 2013 in comparison to 21 accidents reported in the period 2001 to 2007. Clearly the impact that any new fencing proposals may have in funnelling deer to roadsides and potentially increasing the risk of such collisions with vehicles needs to be considered in any future planning. SWRDMG [will continue to monitor the problem and will collate formal records of DVCs noted by members in the area](#). If DVCs are perceived as an issue in the future, SWDMG will act as a forum to identify and assist in the delivery of appropriate actions and SNH/Transport Scotland/ Local Authority will be involved as required ([see also below, at paragraph D1.32](#)).

Non-native Species:

A5.27 Sika are now regularly observed in the area and shot on a number of the Estates. Sika may cause significant damage to unfenced -or fenced - woodlands, if they break into restoration enclosures. Further, hybridisation between sika and red deer and the potential threat posed to the integrity of native red deer populations, is now a matter of widespread concern. While it is probably not practical to eliminate sika from parts of Scotland where they have become well-established, the Group has an established policy of trying to contain populations and reduce spread. Muntjac are not currently present in the Management Area.

A5.28 A small population of feral goats occurred on Ben Damph and neighbouring ground (e.g. Fionnaraich) in the past. Numbers were never large and the current status is unknown.

The structure of this document:

A6.1 Since management decisions must be taken (and reviewed) in the context of a proper understanding of the deer populations of the area, their movements, impacts upon their habitat, and in the light of any specific problems perceived in the future management of this resource, this Plan begins with a brief overview description of the ‘resource’: a description of habitats and deer populations and their condition on individual Estates as well as a brief account of past management practices, as necessary background to formulation of future management. [Section B]. It seeks clear definition of individual and collective management objectives, and explores possible issues arising from past management practices or future management aspirations, as well as necessary constraints on future management decisions.

A6.2 Against that background, in the second part of the Plan, actual management decisions for the next five years are presented for individual land-holdings [Section C] with explanation of how these proposals seek to address any issues identified while seeking to deliver private objectives and public benefits. This theme is expanded in Section D to consider collective activities within the Group as a whole and how combined Group activities deliver against needs and public benefit interests. Tables are added in Appendix to facilitate annual audit of performance against targets set within the Plan of both individual Estates and of the South West Ross Group.

A6.3 The South West Ross Deer Management Area comprises a very significant area. In practice, the area covered may itself be subdivided into a number of sub-areas (within which there is greater interchange of animals and which individually form relatively cohesive units; paragraphs A4.5- A4.8). In presentation of this Plan therefore individual Estates are not treated in alphabetical order, but in geographical ‘clusters’, as:

Applecross/ Couldoran/ Kinloch
Ben Shieldaig/Ben Damph/Coulin
Kinlochdamph/Tullich/ Lochcarron/Glen Mhor
Fionnaraich/New Kelso/ Achnashellach/ Ledgowan

A6.4 Descriptions of individual Estates are largely copied across from the 2002 Plan, but are preserved in this document for reference, and to advise new members of the Group.

It should be noted that indications of Estate boundaries are included only for descriptive purposes; they are not to be considered definitive statements of legal boundaries.

B. VEGETATION, DEER POPULATIONS AND CURRENT MANAGEMENT OF INDIVIDUAL ESTATES

B1 Applecross

Description:

B1.1 Applecross Estate comprises the major part of the Applecross peninsula and forms the western boundary of the South West Ross Management Area. In many respects it now represents a self-contained management unit. Although, to the east (along the Abhainn Dubh and upper reaches of Loch Lundie), it marches with Kinloch Estate, and with Culdoran (along the Allt Loch Gaineamhach and River Kishorn), the development of a new Crofters Woodland Scheme in the northern part of the Estate, the erection in 1999 of a major deer fence from Lonbain in the west to Loch Lundie and Inverbain in the east and the removal of all deer remaining north of that line, effectively isolates the remaining deer populations in the centre and southern parts of the Estate.

There is some exchange of deer to the south of Loch Lundie, with animals moving on a regular (daily) basis between the corries of the eastern side of Beinn Bhan towards the river flats of Culdoran, but otherwise movements are believed to be small other than at the time of the rut.

B1.2 Despite this comparative independence of deer populations, management of the Estate however remains complex since there are a total of 109 crofts registered within the Estate boundaries and there are extensive Common grazings over both north and south parts of the Estate. To the north are the crofting townships of Lonbain, Cuaig, Fearnmore, Fearnbeg and Arinacrinachd, Kenmore and Ardheslaig. These now lie within the area fenced out for the North Applecross Woodland Scheme and thus their grazing stock no longer impact on the open grazings of the remaining part of Applecross Estate.

B1.3 There are a further 9 townships to the south west which have common grazing rights on parts of the main Estate (Milton, Camusterrach, Culduie, Toscaig, Uags, Camusteel, Ardubh, Ardbain, Coilleagillie). A second major deer fence, erected more recently from Milton in the north to the eastern shore of Loch Toscaig in the south now skirts the eastern side of the inbye land of all these southern townships. While deer are thus excluded from this lower ground, few sheep are now grazed on the hill ground east of that fence.

B1.4 Detailed Estate maps show the total Estate as c26000 ha; of which a total of 6630 ha are now exclosed to the north of the NAWC scheme fence and 700 ha now removed from deer range by the South Applecross fence. As with most of the estates within the Management Area, the actual area is hard to assess from map-area because of the mountainous nature of the terrain.

B1.5 Much of the area is mountainous, with grass-moor land on the lower slopes, and areas of shorter grazing ('greens') on the higher faces; vegetation of high corries and saddles is typically wetter, as *Eriophorum* dominated mires, with *Scirpus cespitosus* and *Juncus squarrosus*, with good growth of *Lycopodium* clubmosses (NVC: M17). On better drained slopes, wet heath communities are dominated by *Erica tetralix* and *Molinia caerulea*, with deer grass, *Scirpus cespitosus* and some ling heather *Calluna vulgaris*; in drier areas or where the peat layer is shallow *Calluna* and *Molinia* become co-dominant. On the highest tops, where soils are thin and stony, distinct alpine and sub-alpine communities develop - recognised in the designation of the area of Beinn Bhan as an SSSI.

B1.6 There are some small remnants of native semi-natural woodland in patches within the Estate, notably in the south where an enclosure has been erected around one significant remnant block at Airigh-drishaig (NG 765365), and another to the west of Toscaig township. Some quite extensive additional remnants occur in some of the steeper gullies (as for example in the bed of the River Toscaig at NG 728376 and NG716385, or around Allt Mor, NG745462).

B1.7 There have been, in addition, a number of Woodland Grant schemes to encourage regeneration of native broadleaves. Significantly in the area north of the North Applecross fence, native woodland schemes have been established in collaboration with the North Applecross crofters at Sallachar, Lonbain, Kalnakill, Fearnmore, Fearnbeg and Cuaig, Kenmore, Inverbain and Ardheslaig.

B1.8 At Salachar an area of approximately 50 ha has been established on estate-managed land; the enclosure at Lonbain (146 ha) includes land planted on the common grazings of Lonbain township and (contiguous with this, a small area from Calnachille); a separate enclosure embraces approximately 200 ha of additional land within Kalnakill and 164 ha at Cuaig. Enclosures at Fearnmore include two separate areas of woodland (totalling 180 ha) established within the Common Grazings of Fearnmore township. The plantation at Kenmore includes 171 ha at Kenmore and 165 ha of the adjacent common grazings of Fearnbeg and Arrina. Finally Ardheslaig and Inverbain are separate and self-contained plantings (respectively 163 ha and 188 ha) contained entirely within their respective township areas.

	Original Deductions				
	Totals	SPC/NBL/OG	NN/RN		Established Area
Ardheslaig	162.6		31.2		131.4
Salachar	56.6				49.1
Lonbain	146	38.2			100
Kenmore	171		17.6		120.1
Kalnakill	196.85	49.2	2.2		134.45
Inverbain	188.15	46			131.13
Fearnmore	179.9				158.5
Fearnbeg & Arina	165.1		20.8		129.3
Cuaig	164.1		3.9		135.6
Totals	1430.3	133.4	75.7		1089.58

B1.9 South of this area, other woodland creation initiatives have established new woodland plantings at Airigh-drishaig (126.5 ha), and within the policy woodlands at Applecross (NG725450). A small (1ha) section of the Carnoch Hazel Wood has been deer fenced in order to assess regeneration. and a 2 ha extension has been added to the existing woodland scheme in the main Glen up the Applecross River. Finally a new woodland area (of 9 ha) has been established on Crofting land west of the South Applecross deer fence at Milton around Torr Mor.

B1.10 In addition to these native woodland initiatives there are established conifer plantations around the policies and up the main Applecross Glen (Srath Maol Chalum); while some of these remain ring-fenced many are past the stage at which they would be vulnerable to browsing damage and are now open to the deer. These woodlands have all suffered significant damage due to windthrow. The flats of this main glen itself (Srath Maol Chalum) support mostly a rather coarse, lank vegetation (largely *Molinia* and *Juncus*) although in the immediate vicinity of the House, certain fenced areas offer improved grazing to the Estate's small population of Highland cattle (currently 30 cows and their followers).

B1.11 A separate area of commercial conifer (the Gateway woodland, between the main access road across the Bealach na Ba and The Kennels; c. 78 ha) has recently been felled. Higher parts towards the road itself are on deep peat not suitable for replanting so will not be replanted. However in plans for restocking, the fenced area woodland will be extended at the lower edge and across the Allt Beag, with a riparian scheme. The total area of new planting on the site will be approximately 76 ha. However, 26ha of this is on new open hill ground (Allt Beag) and only 50ha of the original 78ha Gateway site is being planted. The remaining was on deep peat and not considered suitable for planting.

Designated areas:

B1.12 A large upland area (4181 ha) centred on Beinn Bhan and the adjoining Sgurr a'Chaorachain has been designated the Beinn Bhan SSSI and separately designated as a Special Area of Conservation (SAC). This area is seen as a particularly good example of a Torridonian sandstone mountain in which high cliffs and deep corries are well-represented. It has a larger summit area compared to most of the sharp-ridged Torridonian hills and supports a greater representation of vegetation communities characteristic of exposed ground (for details see paragraphs A3.18 –A3.20).

B1.13 Designated features of the site include Upland assemblage, Alpine and subalpine heaths, Tall herb ledges, Acidic scree, Plants in crevices on acid rocks, Dry heaths, Wet heathland with cross-leaved heath and Montane acid grasslands

Objectives:

B1.14 The Applecross Trust aims to run the Estate in such a way as to integrate effectively management towards multiple objectives and clearly there is some zonation of priority of those different objectives across the site. On North Applecross (north of the North Applecross fence) the majority of the land is crofted and there have been a number of initiatives directed towards establishment of areas of native woodland (paragraph B1.7), extending the native woodland corridor south from Ben Shieldaig and Kinloch. Here deer management is directed towards control with the intention of maintaining the entire area free of deer in so far as this is practicable.

B1.15 A new fence in the south from Milton to Toscaig Bay separates crofters inbye land from the open hill grazings (paragraph B1.3). Here too the emphasis is on livestock agriculture by crofting tenants together with a more modest number of woodland schemes; here once again the intention of deer management is for zero tolerance.

B1.16 The Estate farm runs its own cattle within fenced parks associated with the immediate policies of the Lodge and up the main Glen (Srath Maol Chalum) and as noted continues to manage a number of old-established commercial plantations (paragraphs B1.9, B1.10).

B1.17 Within such wider context the Trustees have an over-riding determination that sustainable land-use practices should have an eye to environmental impacts and shall not conflict with the primary objective of maintaining the natural habitats of the Estate in optimum condition. Deer management within the wider Estate is thus primarily directed towards ensuring deer populations are maintained in balance with the habitat. Culling of stags and hinds to maintain stable populations however, in its turn, is calculated to generate a sustainable sporting interest.

Deer populations:

B1.18 Applecross has undertaken annual counts on the main ground for many years, and has, since 2003, shifted the time of counting from that previously traditional for the Estate to undertake its counts at the end of winter. Figures below are summarised for the area south of the North Applecross fence; it is believed that deer populations north of the deer fence are now minimal, and any animals reported are culled.

B1.19 Numbers of red deer counted on the main ground in late winter counts from 2003 -2008 are summarised in the previous Deer Plan [2009-2014]. An update is offered below.

	2008	2009	2010	2011	2012	2013	2014
Stags	503	515	394		456	381	437
Hinds	702	632	613		627	538	619
Calves	246	186	190		177	195	157
Total	1451	1333	1197		1260	1114	1213

B1.20 We may initially note an apparent post winter recruitment rate of 30.8 surviving calves per 100 hinds. Stag numbers counted range between approximately 400 and 500; average hind populations over the period or around 620.

Recent Past Management

B1.21 As noted, deer management within North Applecross and west of the South Applecross fence is targeted at zero tolerance. The remainder of the hill ground is managed as a traditional sporting Estate but with full regard to environmental impacts and a wish wherever possible to enhance the natural environment. The Trust lets the Stalking on a commercial basis and the charges are assessed independently annually. The income is agreed and guaranteed by Deer Management Consultants Ltd; the majority of the stalking is let to clients.

B1.22 Actual cull figures since 2005/06 are summarised below

Applecross Whole Estate:

	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15
Stags	45	60	66	65	66	80	62	69
Hinds	151	147	131	96	108	95	98	109
Calves	60	44	46	31	29	25	24	28
Total	256	251	243	192	203	200	184	206

Included within these totals are an estimated total removed from North Applecross as

Applecross North

	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15
Stags					3	4		1
Hinds							7	
Calves								
Total								

B1.23 In general an average of 50-55 sporting stags are taken each year from open hill ground, with overall cull figures increased by the need to remove animals from woodland plantings (North and South) and remove animals from crofters' inbye. Hind culls have to date been targeted at retaining an overall hind population around 620 head.

B1.24 No winter feeding is provided. A small amount of burning of heather and *Molinia* is undertaken when possible, on small areas only, however the amount of muirburn undertaken is constrained by time and available manpower.

B1.25 Under a recent agri-environmental scheme for grazing exclusion, a number of fields of the Home Farm have been deer fenced. Thus along the access road from the Bealach, the lower three fields of the farm are now deer-fenced and re-seeded to grass or sown to oilseed rape; the upper two fields are not fenced. Under the scheme, gates can be opened overwinter, which allows deer access to lower ground and to this additional grazing. This has proved of benefit in compensation for loss of access to lower ground in this area resulting from the South Applecross fence (paragraph B1.3) - and also as a diversionary tactic to take any possible pressure off that new strategic fence.

Assessments and Issues to be addressed in Future Management::

B1.26 Deer populations have remained stable or shown moderate expansion. Stag populations between 400 and 500 are more than sufficient to sustain an annual sporting harvest of 50 -55 stags or total offtakes around 60 (even allowing for some export in season to Couldoran and neighbouring Estates such as Kinlochdamp and Tullich). Hind populations are somewhat higher than those agreed in previous deer plans and certainly well in excess of numbers required for recruitment².

B1.27 At current and recent past estimates however (paragraph B1.19), overall densities of deer are low (at an estimated 6.2 deer per 100ha) and it is apparent that current deer populations, while they may be higher than technically required in support of current quotas are not excessive when assessed in terms of environmental impacts or the capacity of the range to support them sustainably. Clear reductions in the number of sheep being grazed on the open hill (rather than in in-bye land) over recent years means that overall grazing pressures have further declined since 2009. Although there may be individual 'hotspots' of usage/impact, grazing/browsing pressures on open hill ground within the bulk of the Estate, are assessed (May 2015) as generally light or light-moderate.

B1.28 It is possible however that there has been some overall redistribution of deer across the Estate and recent Site Condition Monitoring within the area of the Beinn Bhan SSSI/SAC suggests that herbivore impacts were now causing concern in relation to the alpine and subalpine heathland features, with twelve of the sample points scored within the alpine and subalpine dry heaths failing as a result of browsing impact recorded. Surveyors noted that the frequency of herd sightings, dung and signs of trampling suggested red deer as the principal herbivore causing these impacts; localised damage by heather beetle was also noted amongst subalpine dry heaths. All other designated features within the site were found to be in favourable condition.

B1.29 Finally, it is appropriate to note that Forestry Commission Scotland have expressed concerns about continuing impacts from deer on the Airigh-drishaig woodland block - it is clear that there is pressure on the Estate to address this.

B2 Couldoran Estate

Description:

B2.1 The former Couldoran Estate was split in 2005 and that section to the west of the A896 from Kishorn to Shildaig, together with an additional area to the east of that same road, at the southern end of Loch Damp (a combined area of about 5000 acres; 2025 ha) purchased by the Raesides.

B2.2 The new Couldoran thus marches with Applecross along a long boundary south-east from Loch Lundie following the line of the burn (Allt Loch Gaineamhaich through Loch a' Chaorainn and Loch Gaineamhach and down to the River Kishorn, thence towards Loch Kishorn itself (although Lochcarron Estate retains the west bank as far as the thrid burn). The northern boundary (with Kinloch) runs from approximately one-third of the way up Loch Lundie across Meall Breac, west north west to the road at (approximately) grid reference NG833505. The eastern section is bounded by the A896 on its western edge, by the access track to Kinloch Damp to the north, and then strikes back to skirt the eastern margin of Loch Coultrie and Loch an Loin before returning to the road [Map1]. [Descriptions and property boundaries indicated on maps are, throughout, approximations only and should not be taken as definitions of legal boundaries].

² [A stag quota of 50-55 would need for its long-term maintenance an annual production of between 60 - 65 male calves; an average harvest at current levels of 60 stags would require perhaps 65-75 surviving stag calves each year, allowing for some export of mature stags to neighbouring properties. Estimated recruitment rates over recent years have shown some decline, but even at a level of 30.8 calves per 100 counted hinds, sustainable production of 75 stag calves (perhaps 150 calves in total) would be achieved by a (mixed age) hind population of around 450-500 head.]

B2.3 The bulk of the ground overlies Torridonian sandstones and has vegetation typical of the wider Wester Ross area: a mixture of wet heath and blanket mires dominated by wet or humid grass-heaths with a mixture of deer grass (*Scirpus cespitosus*), ling and bell heather (*Calluna vulgaris* and *Erica tetralix*), together with *Molinia caerulea*. Where the ground is less-well drained and peat has accumulated there also develop extensive tracts of deer grass/cotton grass blanket bog (*Scirpus cespitosus* - *Eriophorum vaginatum* mire); in places where the vegetation is relatively undisturbed there may be widespread development of *Sphagnum* moss and other bryophytes. More exposed areas with thinner soils and high plateaux support a more montane vegetation type with hummocks of *Racomitrium* moss and *Cladonia* lichens, and widespread development of clubmoss (*Lycopodium* species). One or two areas of broadleaved woodland persist in the steeper, less accessible gullies of west Couldoran, although there are no signs of recent regeneration.

B2.4 A number of woodland grant schemes have been established within the Estate, largely associated with the main policies: an enclosure of birch between the main house and the road, and a further broadleaved enclosure (established somewhat later) further towards Loch Kishorn. The fence of the inner policies remains secure (although deer had ingress through an open gate, now replaced). Fences of the outer enclosure were never fully secure and are increasingly undercut by changes in the course of the River Kishorn and deer now have access to this area. The roadside fence is however maintained to guard against risk of deer-vehicle collisions on the A896.

Deer populations:

B2.5 Ground to the west of the road at least has always been considered primarily stag ground. Densities are not especially high. Numbers from 1999 to 2007, from late winter or early spring counts are summarised in the previous South West Ross Deer Group Plan, and are updated here to the present day:

	2008	2009	2010	2011	2012	2013	2014
Stags	25		17	32	38	32	34
Hinds	45	No	17	15	18	23	18
Calves	0	Count	19	10	10	14	7
Total	70		44	57	66	69	59

[The 2008 count did not cover the whole estate so must be taken as a minimum estimate]

B2.6 It is noted however that while this is typical of daytime counts in late winter, there is significant influx of animals from the eastern corries of Beinn Bhan on Applecross overnight as animals come down from Coire Tolla' Mheine, Coir' an Fhamair, Coire na Poite to graze overnight on the river flats, withdrawing again at dawn. Thus while average hind numbers probably are between 17-20, stag numbers may rise as high as 40 overnight.

Hinds are scattered in small groups throughout the ground to the west of the A896 in small groups of perhaps five or six; larger groups are occasionally encountered further towards the south, probably reflecting this influx of animals hefted across the march in the corries of Beinn Bhan. Stags are largely associated with the area around Beinn a' Chait and again may show significant movement between here and Coire Tolla' Mheine on Applecross. Relatively few deer are believed to be hefted in the northern part of the estate near the march with Kinloch, or to the east of the A896.

B2.7 On this basis we may presume an approximate steady population of around 30 stags (average 29.7); 15-20 hinds (average 18.2 between 2010 and 2014). At current estimates, densities of deer on the (unenclosed) Estate are therefore of the order of 3.0 deer per 100 hectares.

B2.8 During the rut, stags may additionally draw onto Couldoran from Applecross to the west, or across Kinlochdamph, from Ben Damph to the east.

Recent Management:

B2.9 Since 2005/06, culls for Coudoran are returned as:

	06/07	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15
Stags	3	0	5	4	4	4	4	2	4
Hinds	6	0	3	0	2	1	0	1	1
Calves	0	0	0	0	0	1	1	1	1
Total	9	0	8	4	6	6	5	4	6

The 2005/06 and 2006/07 seasons were let out annually but this has been stopped and all stalking is undertaken by the owners and their retained stalker. No cull was taken in 2007/08 due to a change in stalker at this time.

B2.10 No winter feeding is carried out on Coudoran, and in the past there has been little active management of vegetation. A major (accidental) hill fire in the north half of the property west of the road, burnt a large area of ground from the march south towards the mast. This is recovering well, but in consequence there have been no plans for future muirburn, although some targeted small burns might be attempted on the west side of Beinn a' Chait in the future.

Objectives; issues to be addressed in formalising Future Management:

B2.11 The owners wish to manage Coudoran as a sporting Estate and primarily for their own enjoyment. They have historically restricted offtake of stags to that reported in the original sale particulars as round 6-7 per year (or indeed fewer than this if timings are such that they are unable to come up for protracted periods in season), they would consider such a target as provisional only and would consider over time, increasing the quota to take up to a maximum of 10 stags in any year should numbers on the ground be appropriate to sustain this.

B2.12 Current populations of stags (a population of around 30 mixed age stags in late winter counts) would if resident, normally be considered sufficient to sustain a quota of 4-5, in keeping with current harvests. Current hind populations are rather low in relation to such a quota; although it is recognised that Coudoran is stag ground rather than hind ground and thus all stags would not necessarily be expected to be home-grown. Coudoran has and will continue to have an considerable influx of stags during the rut potentially supporting a higher level of cull. When numbers permit the owners might take up to a maximum of 10 a year but area at present we are keeping to a lower quota to ensure sustainability of harvests over the wider area.

B3 Kinloch**Description:**

B3.1 Kinloch Estate (3,500 acres; 1420ha) is a small Estate to the west of the A896, at the end of Loch Shildaig. Along the length of the Abhainn Dubh and Loch Lundie, it marches with Applecross but is now largely separated from that Estate by the North Applecross Woodland scheme fence along the full length of the Abhainn Dubh. To the south, Kinloch marches with the west part of Coudoran; it is separated from Ben Shildaig to the east by the A896.

B3.2 The estate is now wholly owned by the Kinloch Woodlands Charitable Trust whose main objective is to extend and restore native woodlands on the Estate. To that end some 130.3 ha towards the north east of the Estate (land adjacent to Loch Dughail) were fenced off in 1994 and planted with a mixture of Scots pine and native broadleaves (all of local provenance); the area also encloses and protects an existing fragment of birch and alder woodland on the west bank of the Allt Ceann-locha.

A further two areas totalling 314 hectares were added to the south in 1999, once again fenced and planted with Scots pine (of Shildaig seed) and mixed broadleaves, while a further area (approx. 40 ha) to the north, at Doire-aonar, has been enclosed from Common grazing land, within a Crofting Woodland scheme by Kinloch's crofting tenant Mr Douglas Calcott. In total therefore some 484 hectares of the Estate are thus enclosed within fences and devoted to woodland restoration schemes.

B3.3 The Estate itself runs no livestock, but some 1000 acres (400 ha) to the north and west (beyond the 1999 fence) is Common grazing land. 40 ha. of this are, as noted, now enclosed in a Crofter's Woodland scheme, linked directly with the Estate's woodland restoration schemes; crofters Mr and Mrs D. Calcott run sheep and some Highland cattle over the remainder of these grazings.

B3.4 These grazings and the remaining hill ground to the south west (and the march with Couldoran at Loch Lundie) offer the familiar mix of *Eriophorum* blanket mire, wet grass heath (dominated by deer grass, *Scirpus cespitosus*, purple moor grass, *Molinia caerulea*, and bell heather *Erica tetralix*), with drier patches where ling heather, *Calluna vulgaris* and *Erica cinerea* tend to become more dominant within the deer grass/*Molinia* sward. Any bare areas of peat are noted to support patches of the oceanic liverwort *Pleurozia purpurea*; exposed stony areas on the higher ground had good growth of stags horn lichen, *Lycopodium* clubmosses and scattered *Alchemilla alpina*. A detailed Phase 1 habitat survey was undertaken as part of a wider survey of the Loch Dughail Catchment Area, itself carried out as part of an overall assessment of the area's potential for Sea Trout (Saranne Bish and Andy Acton, September 1995: **Loch Dughail Catchment Area (Glen Shildaig); Phase 1 Habitat Survey**. Report commissioned as part of the Shildaig Sea Trout Project (SOAFD).

Deer Populations and Management:

B3.5 With the erection of the main deer fence on Ben Shildaig in 1995/1998, reducing deer densities in the northern part of the Estate and the subsequent the closure of the North Applecross Woodland fence in 1999, Kinloch has becoming increasingly isolated from any other neighbouring deer populations, except with those of Couldoran to the west. Given its relatively small size in relation to red deer home ranging patterns) deer populations resident on (or utilising) Kinloch must effectively be considered part of the same basic population as that utilising Couldoran.

B3.6 Deer densities are generally low. Counts are carried out opportunistically throughout the year. Numbers are summarised below

Year	2007	2008	2009	2010	2011	2012	2013	2014	2015
Stags	9	9	1	10	16	18		7	1
Hinds	18	23	7	13	5	8	No	11	5
Calves	1	5	0	5	5	5	Count	6	1
Total	28	37	8	28	26	31		24	7

B3.7 Deer management within the Estate is focused primarily on removal of any deer which manage to break through the fences (or swim round through Loch Dughail) and establish within the restock areas and avoiding any significant increase in numbers on the open hill.

B3.8 Culls from 2002-2007 are presented in the previous Deer Plan and averaged around 6 stags, 3-4 hinds and perhaps 2 calves per year. Since that time culls are summarised below (calendar years) as:

Year	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Stags	13	10	10	10	13	15	10	11
Hinds	6	7	6	3	3	2	5	7
Calves	3	5	5	3	1	1	2	5
Total	22	22	21	16	17	18	17	23

It is clear that numbers of stags being taken, in particular, have increased substantially

Issues for consideration in relation to future management

B3.9 Objectives of the Trust remain clear in seeking to safeguard, restore and extend native woodland resources of the Estate. To this end, deer management effort is, and will continue to be focused on removal of animals breaking in to established enclosures.

B3.10 There is a small population of deer established on, or at least utilising the open hill ground above the enclosures - largely continuous with the population of Couldoran. Management here is focused on trying to ensure that numbers do not increase to the point where there is a significant increase in incursions into the enclosures.

B3.11 Given growth rates of both planted trees and those established by natural regeneration, the Trustees have every intention of maintaining existing fence lines beyond the end of any formal grant period, aiming to keep fences in places as long as this is felt likely to be of benefit to the trees; fences will thus certainly remain in place through the next 5 year period of the Group Deer Plan.

B3.12 Other concerns relate to the likely increased colonisation of woodland enclosures by roe deer as native woodland re-establishes itself. Certainly, once reaching sufficient density roe are capable of causing very significant damage both in commercial and amenity woodland areas; at low densities however, since their browsing tends to be rather 'localised', their impact can actually be of advantage in breaking up the even-aged nature of unbrowsed regeneration and producing a degree of spatial heterogeneity/diversity.

B4 Ben Shieldaig Estate

Description:

B4.1 Ben Shieldaig Estate in effect comprises the central massif of the mountain of Ben Shieldaig itself. With an area of 4800 acres (1940 ha) the Estate embraces the ground between the A896 Shieldaig to Kishorn road on the west side, Shieldaig village and Upper Loch Torridon on the north side, and Loch Damph to the east. The estate extends south as far as the south end of Loch Damph. Its neighbours are, to the west: Kinloch and the northern end of Couldoran; to the south: Kinlochdamph and to the east Ben Damph Estate.

B4.2 The topography is mostly steep, particularly on the almost cliff-like north and west slopes of 1700 ft Ben Shieldaig. The majority of the open hill has vegetation typical of that already described for this part of Wester Ross with wet heath and mire vegetation (*Erica tetralix*/*Molinia caerulea*/*Scirpus cespitosus*/*Eriophorum*) dominating the southern and west-facing slope, and a stronger growth of both bell and ling heather (*Calluna*) on the drier slopes to the north and east

B4.3 In addition there are two extensive and extremely significant areas of native woodland on Ben Shieldaig to a total of 301.8 ha. To the north is an extensive area of upland birch woodland (Mheallaidh Wood: downy birch with sessile oak, also including some rowan and scattered pines) on the slopes of Sron an Fhithich behind and to the east of the Shieldaig township. On the west face of the massif above Loch Dughaill is a large area of Caledonian pine (Coille Creag-loch), remarkable both for its extent and the fact that it shows a mix of ages and height classes and is clearly in a state of continuous recruitment and regeneration. It is considered to be the most Westerly area of Caledonian Pine in Europe; the pines of Ben Shieldaig are of the distinctive Wester Ross type, believed to have maintained a continuous presence in the area for 8000 years, and both woodland sites have been designated within a single SSSI [the Shieldaig Woods SSSI] since 1984 and are included in the more recent Loch Maree Complex SAC (paragraph A3.6).

B4.4 The success and persistence of this sizeable area of pine is due in no small part to the topography of this northern end of Ben Shieldaig, where the land form provides an abundance of shallow ledges below sheer cliffs (thus inaccessible to sheep or deer) - and it is on these more inaccessible ledges that the pines are concentrated. The birch woodland is to a degree more accessible and in protection of both woodland blocks, a deer fence was been erected in 1995 across the Estate from Loch Dughaill in the west to Loch Damph in the east, effectively fencing off 830 ha of the northern part of the Estate, in order to control deer movements and provide an independent management block within which to maintain lower densities of deer at a level consistent with continued regeneration within the woodlands themselves.

B4.5 The western side (along the A896 on Loch Dughaill-side) is stock-fenced to prevent access by sheep and this stock fence continues to the east, along the limit of the Shieldaig common grazings, to keep sheep out of the main block of the birch woodland of Sron an Fhithich. In practice, in following the line of the permitted outrun, this fence is set back some distance into the north edge of the birch woodland, although the woodland both sides of the fence appears to be doing well. There is no fence along the northern boundary, but the river and the waters of Loch Damph form a reasonably effective boundary.

B4.6 In effect therefore the management of Ben Shieldaig is divided into three distinct areas. Within the grazing area of the Shieldaig Crofting Township, the primary land use is for sheep grazing. The remaining area north of the deer fence (but to the south of the common grazings) is primarily managed to promote the regeneration and expansion of the existing native pine and birch woodlands; deer are not to be eliminated from this area, but managed to maintain them at a low density to a level where their impact does not compromise regeneration. The area south of the deer fence continues to be managed as a deer forest for traditional open hill stalking.

Designations and conservation management:

B4.7 As noted, both the birchwood and the Coille Creag-loch pinewood have been designated within the Shieldaig Woods SSSI and are now included in the Loch Maree Complex SAC. The pinewoods are also listed as a Nature Conservation Review Grade 2 site and a registered Native Scots Pine Seed Collection Area. Ben Shieldaig Estate as a whole lies within the Wester Ross National Scenic Area.

B4.8 The site contains one of the largest areas of semi-natural woodland in Wester Ross. As described above, on the north facing slopes of Ben Shieldaig itself, downy birch is predominant with scattered sessile oak and rowan; native Scots pine is restricted to the upper crags. This area is particularly notable for its oceanic bryophyte communities. On the drier, south-west facing slopes native Scots pine is dominant with birch and rowan now occasional rather than co-dominant. These woodlands are considered to be internationally important due to the scarcity of the habitat in the European context and support nationally important bryophyte and invertebrate assemblages.

B4.9 There have been ninety-four species of moss recorded on the site, of which four are nationally scarce species and thirteen of restricted British distribution. In addition, fifty eight species of liverwort, three species being nationally scarce and 23 species of restricted British distribution have been noted. Shieldaig Woods is, therefore, nationally important for its bryophyte flora. The woodlands of Shieldaig are also of national importance for the characteristic assemblage of invertebrates; the site hosts the Red Data Book listed hover fly *Callicera rufa* and three nationally scarce beetles, all of which are native pinewood specialists.

B4.10 Past grazing pressure and three fires, two in the 1930s and one severe fire in 1974, have shaped the present woodland structure into the current open canopy with under-developed shrub layer and modified ground flora. Sheep and Red deer have heavily grazed the woodlands in the past, although

recent management has aimed to reduce grazing impact. Historically deer populations on Ben Shieldaig have not been at sufficient density for deer alone to prevent woodland regeneration. However with the improved quality of vegetation resulting from the reduction in sheep numbers, it was predicted that the number of deer wintering in the Shieldaig woods might rise.

B4.11 To control deer movements, as noted, a deer fence was put up in September 1995 which divides the Estate. The fence runs from Loch Damph over the ridge of Ben Shieldaig to meet the road at the south end of Loch Dughaill. An additional section was put up in March 1998 which extends north along the road beside Loch Dughaill, as far as the stock fence.

Objectives :

B4.14 The estate was bought by the current owner in 1990; current management and plans for the future are summarised in the Estate's own Deer Management Plan (January 2001). As already noted, the management of deer is split into two separate areas by a deer fence across the estate.

B4.13 In essence, the north end of the Estate is managed (and is to continue to be managed) to maintain deer populations at levels which do not impair the capacity for natural regeneration within the Caledonian pine and birch woodlands. Deer are not to be eliminated, but culling pressure is to be targeted towards ensuring that densities remain at or below 4 deer per square kilometre. The south end of the estate will continue to be managed as a traditional deer forest.

Deer populations:

B4.14 Spring counts of deer were not traditionally carried out on the Estate on a regular basis in the past, although data from counts (of the whole Estate) in 1990, 1995, 1997 and 1999 are summarised in the 2009-2014 Deer Plan.

More regular counts have been undertaken subsequently and figures are summarised below for end of winter counts within the deer-fenced area to the north and the unfenced open hill ground to the south

Woodland areas [830 ha]

Year	2008	2009	2010	2011	2012	2013	2014	2015
Stags	16			20	14	10	14	13
Hinds	20	No	Data	15	28	25	15	10
Calves	0			3	5	3	6	1
Total	36			38	47	38	35	24

Unfenced hill ground south of the deer fence:

Year	2008	2009	2010	2011	2012	2013	2014	2015
Stags	4	6	5	2	2	3	2	0
Hinds	8	4	5	3	5	7	0	0
Calves	0	0	0	0	0	0	0	0
Total	12	10	10	5	7	10	2	0

B4.15 Despite the fact that relatively few resident stags are recorded in spring counts April, Ben Shieldaig does experience an influx of stags after the breakout. While some are seen moving on in November/December many may remain for part or all of the winter. Depending on weather and other influences, stags may cross the Balgy in some numbers; over 25 stags have been reported in some years, under 12 in others. The result of this is that the Estate has relatively little control over numbers and impacts from stags and current policy is to cull any deer that are causing a nuisance on the common grazings and any stags that are considered to be in bad condition.

Recent Past Management

B4.16 The Estate has based its management on its own working Management Plan, prepared by James Grant in January 2001, which was effectively ‘imported’ as it stood into the SWRoss Group Plan. In summary it proposed

North of the deer fence.

B4.17 “**Deer will be managed for the area to support a concentration of 4-5 red deer per km².** At this concentration it is predicted that deer will have a positive impact on woodland biodiversity whilst having minimal impact on the height of young trees (Forestry Commission Guidance Note 11). With 7.6 km² of ground north of the fence, the area will hold 30 red deer at a density of 4 per km² although it is considered that the area should hold up to 40 deer with little damage occurring.

B4.18 “**The estate aims to maintain a balanced population of deer, therefore aiming to have around 11 stags, 14 hinds and 5 calves.** In the long term, it is hoped that this deer population will be resident in the woodlands all year round.

B4.19 “Future cull levels will be based on regular counts to maintain the population at 4 deer/ km². A programme of vegetation monitoring is also to be initiated in order to assess the levels of browsing damage sustained. If the level of browsing is considered too high, the target population above will be reduced. The Ben Shieldaig Plan details appropriate proposals for monitoring changes in vegetation cover and monitoring browsing damage levels.

South of the deer fence

B4.20 The Ben Shieldaig Plan makes few definitive recommendations for management of the deer on the open hill ground to the south of the deer fence, merely noting:

- “ Deer numbers will be assessed as part of the Deer Commission for Scotland area counts
- “ The cull target will be consistent with the policy of the neighbouring estates in the SWRDMG.

B4.21 In practice cull patterns are adjusted year on year depending on perceived need (see above paragraphs B4.15, B4.19), and are concentrated within the area north of the deer fence in order to maintain reduced densities in this area.

B4.22 Cull figures from 2002-2009 are summarised in the previous South West Ross Deer Plan. Numbers are updated here as:

Within woodlands: (North Block)

Year	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Stags	3	4	1	3	0	1	5	8
Hinds	4	0	0	0	0	0	17	9
Calves	1	0	0	0	0	0	0	0
Total	8	4	1	3	0	1	22	17

Outside the woodland area : (Open hill; South block)

Year	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Stags	0	0	0	0	0	1	1	0
Hinds	2	0	0	0	0	0	0	0
Calves	0	0	0	0	0	0	0	0
Total	2	0	0	0	0	1	1	0

B4.23 It is clear that culling effort is still primarily concentrated within the woodland block (with only two stags taken outside this area in the past 5 year period. Culling pressure within the woodlands has been modest, but in response to concerns expressed during routine site condition monitoring in relation to browsing pressures recorded within the more accessible birch woodland parts of the site, culls of red deer were increased substantially in 2013/14 and again in 2014/15. In some measure the increased browsing pressure reported was due to an incursion of sheep from across the Balgy; these were also removed or shot out. As noted Ben Shioldaig experiences a significant influx of stags during the rut and many remain; increasing numbers are shot where it is felt that numbers are causing an appreciable local impact.

B4.24 Management south of the fence continues to be minimal. Once again this is not of obvious concern (and population densities are obviously low). Ground here is continuous with that of Kinlochdamph and populations are likely to be strongly influenced by continuing and future management activities on that latter Estate.

B4.25 The Estate continues to essay an annual count, both within the woodland areas and beyond. In addition, under the provisions of the Estate Management Plan, a programme of vegetation monitoring was to be initiated in order to assess the levels of browsing damage sustained. Methods outlined in the original Management Plan have not been maintained. In practice, Hugh Tollemache goes each year to certain points above the woods, and takes note of any damage to saplings, and the upwards spread of natural regeneration. Fixed point photographs are recorded.

Assessments and issues for consideration:

B4.26 As noted, regular monitoring is undertaken through most of the areas fenced for woodland restoration. However, the most recent condition assessment within the SSSI in August 2013 found the birchwood feature to be in unfavourable condition; whilst there is good regeneration on the lower slopes of the birch wood there is less regeneration higher up the slope, with regeneration restricted to rocky outcrops. This appears to relate to both exposure, which results in a slow annual growth rate of trees, as well as browsing. The condition of the pinewood feature remains favourable

B4.27 As noted action has already been taken through removal of a flock of Soay sheep which had crossed into the area across the Balgy and by increasing cull targets through 2013/14, with those culls focused within affected areas. But this is clearly an issue to be closely monitored in the future.

B5 Ben Damph

Description:

B5.1 Ben Damph Estate (14820 acres; 6000 ha) is one of the northerly estates of the SW Ross Group, lying between Ben Shioldaig and Coulin, to the south of the A896 and Glen Torridon. Its western boundary with Ben Shioldaig is formed by the waters of Loch Damph. The boundaries of the Estate actually make contact with a remarkable number of other properties within the Management Group, resulting in a potential for exchange of animals (and reciprocal influence of management) with other Estates. To the west lies Ben Shioldaig, while at the south end of Loch Damph, and up the watershed of the Abhainn Dearg, it marches with Kinlochdamph. To the south and east the ground runs alongside that of Fionnaraich - and at that point is also effectively adjacent to North Achnashellach. Finally, as already noted, the eastern boundary, from Meall Dearg, past Lochan Neimhe and down the watershed to the Lochan an Iasgair, marches with Coulin. Central to the Estate are the massifs of Beinn Damph, Beinn na h'Eaglaise and Seana Mheallan.

B5.2 Much of the open hill vegetation is typical of this more northern part of the Management area, with grass heaths covering the lower slopes (purple moor grass, *Molinia caerulea* with deer grass, *Scirpus cespitosus*, accompanied by bell heather *Erica tetralix* and increasing proportion of ling *Calluna vulgaris*, on drier, better-drained areas); blanket mires on the more poorly-drained and flatter ground (dominated by deer grass, *S. cespitosus* and bog-cotton, *Eriophorum* amongst the *Molinia* and bell heather). There are a number of woodland fragments, particularly along the northern boundary of the Estate.

B5.3 On the lower slopes above the eastern shore of Loch Damh itself, there is an extensive area (some 310 hectares) of native broadleaved woodland, designated in 1985 as a Site of Special Scientific Interest (paragraph A3.5). This woodland of Doire Damh is regarded as one of the best examples in the north west Highlands of a sessile oak-birch woodland on wet soils - and is also of some strategic importance as part of the wider sweep of native woodland relicts along this part of Glen Torridon (notably also the Caledonian pine and native birch woodlands of Ben Shieldaig). The entire area has now been fenced in 3 major segments, with appropriate downfalls left between the fenced sections to allow continued movement of deer from higher ground, to the loch-side and access to the Loch shore. It is proposed in the future to remove top and bottom fences from these blocks and roll these over to fence the intervening unfenced sections in their turn.

B5.4 In association with this protected woodland two additional areas of native woodland have been planted to the north of Doire Damh itself, at the northern end of Loch Damh and on the eastern bank of the River Balgy, below Beinn Bheag. The first of these fenced enclosures of 40ha was planted in 1995/96 with birch, Scots pine and other native broadleaves; this restocking has been extremely successful and the scheme was extended in 2001/02 with the planting of a further 36 hectares.

B5.5 A further 68 ha of common grazings was enclosed in 2003/04 at Seanna Mheallan (Coire Buidhe), on either side of the Abhainn Thrail (NG 915545) under a Crofters' Forestry Scheme.

B5.6 There is a further existing area of native woodland cover in the mouth of the Allt Coire Roill, extending some distance up the steep-sided gully of this stream. There are also a number of fragments of birch woodland and patches of what may, from their morphology, be Caledonian pine, scattered behind this, and above the road, back towards the viewpoint at Og Gorm Mor (grid reference NG888538 to 872541). The provenance of these trees clearly need to be checked. These isolated clumps of pine, and the fragments of birch within this area, are in any case intimately associated with what are clearly old Victorian plantation woodlands of larch and spruce as well as other exotic species.

B5.7 In the previous Plan it was noted that there was a growing problem of rhododendron encroachment in this area (most notably in the roadside woodlands towards Annat). There is also a significant problem with rhododendron to the north of the A896 along the coastline from the Loch Torridon Hotel, west to Dubh-aird and Og Gorm Beag. Over the last few years the Estate has been engaged in a significant programme of rhododendron removal with a total of 80 ha to be completed by end of 2015. The Estate maintains a programme of rhododendron eradication along the access track in this area and in the area between Balgy and Dubh-Aird; subject to appropriate funding, a more comprehensive programme may be started in the next year or two.

B5.8 There is one crofting tenant of the Estate at Annat (Iain Maclean in partnership with his son, Iain). The croft has a limited area of in-bye land and the sheep are only brought in for 3 or 4 weeks around key times (lambling, dipping, shearing) and for the rest of the year are run on the hill grazings to the east of Annat and onto the lower slopes of Seanna Mheallan. There is a stock fence defining the upper limit of this outrun, as far as Lochan Neimhe and the sheep do tend to stay below this line; the eastward movement of sheep in this area may be somewhat curtailed due to fencing associated with the

Crofters' Woodland Scheme at Coire Buidhe (B5.5). Total numbers are around 100 ewes (plus followers) and the Estate also maintains a flock of 30 ewes.

Designations:

B5.9 As noted above, the 310.4 ha of Doire Damh have been designated an SSSI since 1985 and are now included within the Loch Maree Complex SAC. Doire Damh woodland is considered one of the best examples in the North West Highlands of a sessile oak-birch wood on rich soils. The open woodland occupies steep west facing slopes, with the canopy being dominated by birch with scattered hazel, rowan, oak and holly. The amount of woodland present within the SSSI is actually quite small, since trees are relatively sparsely distributed over its area. Most of the trees are mature but good regeneration has occurred in recent years over a large part of the site and the site was assessed during routine Site Condition Monitoring by SNH in 2006 as "favourable- maintained".

B5.10 The northern part of the wood in particular supports a diverse woodland and grassland flora with locally uncommon woodland plants such as wood false-brome (*Brachypodium sylvaticum*) and mountain melick (*Melica nutans*), along with grassland species including common twayblade (*Listera ovata*) and greater butterfly orchid (*Platanthera chlorantha*).

B5.11 Lichen/bryophyte interest has not been assessed, but it is likely that the site supports a rich community of mosses, liverworts and lichens. The northern half of the woodland is crossed by a series of springs and seepages with base-rich water influencing a large area. This gives rise to interesting base-rich flush communities with starry saxifrage (*Saxifraga stellaris*), alpine-meadow rue (*Thalictrum alpinum*) and sea plantain (*Plantago maritima*). Above the tree line is a series of crags, screes and rock outcrops which support ungrazed tall herb and dwarf shrub communities, in which a range of tree species, heavily influenced by exposure are found in association with uncommon species such as northern bedstraw (*Galium boreale*) and globeflower (*Trollius europaeus*).

Deer populations:

B5.12 The Estate has had no tradition of regular census of the deer populations and there have been no formal counts other than those carried out by the Deer Commission or SNH. Numbers are reported to be low and stable; estimate for late summer numbers (October 2001) for the 2002 Plan suggested a summer population of some 60-80 stags, 120 hinds and 40-45 calves.

B5.13 The best areas for hinds are considered to be the slopes above the (now-fenced) Doire Damh, from Sgurr na Ban Mhóraire along the western face of Beinn Damph; to the south of this (beyond the fenceline), on the same slopes below Meall na Saobhaide and around the 'nose' of Creag na Saobhaide into Srath a' Bhathaich and on the northeast slopes of Coire Roill.

B5.14 Some younger stags associate with these hind groups, and the Estate overwinters some mature stags in the northwest corner on the slopes of Seana Mheallan and Beinn na h'Eaglaise. During the summer, there are three areas which carry a significant stock of stags, around Seana Mheallan/Meall a Chuail and Meall Dearg; in the Coire nan Cadhan and An Ruadh-Stac; and in the area around Badan-Mhugaidh towards Balgy. It is noted that numbers of stags using Seanna Mheallan area have declined.

B5.15 Historically however, stalking has largely been dependent on influx of animals in the season from Coulin and Lochcarron/Tullich. It is considered that the effects of closure of the North Applecross Woodland fence have had a considerable effect, since there was in the past a recognisable movement of animals in season from Applecross across the western part of Couldoran (below Loch Lundie) and onto the Estate round the southern end of Loch Damph. In addition, the deer fence separating the north and southern areas of Ben Shieldaig is considered to have resulted in a decrease in summer and wintering populations of stags at Balgy.

Recent Management:

B5.16 Culls taken since 2008/09 are summarised from central DMG records as:

	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15
Stags	11	6	7	14	11	13	9	13
Hinds	5	6	6	7	5	7	6	9
Calves	2	1	1	2	0	1	1	2
Total	18	13	14	23	16	21	16	24

As well as the 12 stags culled in season in 2014 a further 5 were also taken out of season, either shot in enclosed woodland (1), killed or injured (and subsequently shot) on road (2) or found dead (or at least nearly dead, then shot) (2).

B5.17 In the absence of formal counts however it is hard to assess cull levels in relation to actual population size although it is noted that hind culls are somewhat below levels which might be considered appropriate for maintenance of a population previously presumed to be in excess of 100 (paragraph 5.12). In the absence of regular count data however it is hard to assess what effect these culls may have had on population levels overall.

B5.18 An area of muirburn was carried out on Seana Mheallan in 2013 by the crofting tenants. Eradication of 80 ha of rhododendron within woodland areas will affect distribution of shelter across the Estate but in the long term should improve winter feeding. No supplementary (artificial) winter feeding is provided by the Estate but animals may be drawn to winter feed provided on neighbouring Kinlochdamph.

B6 Coulin Estate**Description:**

B6.1 Coulin Estate (total area 9,417 ha) lies to the south of the Beinn Eighe NNR and the A896 road from Torridon to Kinlochewe and stretches right across to the A896 at the western boundary of Ledgowan. It occupies a strategic position at this eastern end of the Group area, forming the eastern boundary of the whole Group Area in the north, and in the south, marching with Ledgowan as the 'eastern marker'. To the west, the northern section of Coulin marches with Ben Damph and the southern part marches with Achnashellach.

B6.2 Coulin is a diverse Estate, with a variety of landscape types and formations. The core of the main Estate is formed by the glen of the River Coulin and Lochs Coulin and Clair. There are a number of (old) forestry plantations around this area and around the policies of Coulin Lodge, but there are also extensive areas of native broadleaved woodland (birch, rowan, aspen, alder) and a number of significant fragments of Caledonian pine (paragraphs B6.11 – B6.13).

B6.3 To the west the land becomes more rugged and stony, with the exposed rocks of Sgurr Dubh and the moraines of Coire a' Chaud-Chnoic (the valley of a hundred hillocks), described as one of the best, most accessible examples of hummocky moraines in Scotland (SNH Site Evaluation).

B6.4 The greater part of the ground used by deer comprises a band across the south and eastern parts of the Estate (from the slopes of Beinn Liath Mhor and Coire Beinn Liath Beag, across the upper flats of the River Coulin to the western slopes of Carn Breac, northwards across An Leathad and Moine Mhor towards Carn Dhomhnuill Mhic)

B6.5 The vegetation of this ground is typical of much of the rest of the hill ground in Wester Ross: with deergrass / *Molinia*/heather assemblies (*Scirpus cespitosum*/*Molinia caerulea*/ *Erica tetralix* or *Calluna vulgaris*) dominating much of the lower slopes (with *Calluna* predominating on drier ground, *Erica* becoming more abundant on wetter areas. On higher ground, peat mires may develop in less well-drained basins, while in better-drained stonier sites there is good growth of stags horn lichen and *Lycopodium* clubmosses. On the screes and steeper slopes of higher ground there are good grazing areas ('greens'), for example on the face of Cnoc Daimh (above the Tea Hut, facing Easan Dorcha); on the eastern faces of Meall an Leathaid Mhor, the slopes of Carn Breac and Leathad Doire Beath; the west facing slopes of Creag na Rainaich and Carn Dhomhnuill Mic a' Ghobha. There is also good grazing, albeit of coarser grasses, on the lower slopes and flats of the main Coulin river and on the old farm pastures and flats around Loch Coulin.

B6.6 There are a number of old conifer plantings within the Estate (notably at the Tea Hut; c 6 hectares; 56 hectares around the old farmstead at Coulin (Farm Wood, Hill Park Plantation) and Torran Plantation (182 hectares). These have been planted variously between 1964 and 1985, but are now beyond the stage at which they would be vulnerable to browsing; for the most part fences are no longer maintained or have actively been removed and deer have full access to the cover and feeding provided within the plantations. Within Torran Plantation however, sections of the fence below the central track have been renewed and are deer-proof, separating the older plantings (largely Lodgepole pine and sitka spruce, from newer plantations. To the south the Estate has recently acquired a further area of mature coniferous plantation to the south of Beinn na Feusaige, formerly managed by Fountain Forestry

B6.7 By the road side additional plantations of c21 ha largely of Sitka spruce and Lodgepole pine between Loch Clair and the Estate's access track ("Road End") have been felled and has been planted with a mixture of Scots pine and native broadleaves. The former Lodgepole pine plantation at Ghiubhais Mor to the south of the Kinlochewe road was similarly felled in 2001 to clear around a number of patches of Caledonian pine still surviving amongst the exotics, subsequently to allow a mixture of natural regeneration and restock planting of native broadleaves and Scots Pine.

B6.8 In addition to these areas, there is an area of 23 ha. of Policy Woodland established around the Lodge and there are a number of patches of "Rothiemurchus Scots pine" in the south of the Estate to the east of the Coulin River on the lower slopes of An Leathad. Although these were originally established as plantations in the Victorian period, they now remain mostly as scattered clumps of trees between Stoney Bridge and Torran Cuilinn, where they actually provide rather an attractive landscape feature as well as offering good cover to the deer in this area. The Policy woodlands around Coulin Lodge have also been progressively cleared of exotics to leave only birch and Caledonian pine and more recently this same removal of exotics has been extended to the Hill Park plantation. Throughout the area there has also been an intensive and continuing programme of removal of *Rhododendron ponticum*.

B6.9 In total, it is estimated that, non-native woodlands within the Estate currently extend to 443.6 ha.

B6.10 Coulin Estate is fortunate in having a number of extensive areas still remaining of both Caledonian pine woodland and native broadleaved woodland (birch and associated species). Over recent years considerable efforts have been made to protect and promote these woodland areas.

B6.11 The most significant areas of Caledonian pine in this northern part of the Estate are those of the Loch Clair Woodlands (on lower slopes to the south and west of Loch Clair, fenced in 1979 and 1990); a further small area on the west bank of the loch was also fenced in 1994. Together these northern blocks form a significant resource of Wester Ross pine even in isolation; their significance becomes greater when one appreciates that the northern part of Coulin is contiguous in the north to the

Caledonian pines (either currently present, or part of regeneration efforts) on Beinn Eighe National Natural Reserve and the National Trust for Scotland's Reserve at Torridon; these woodlands are indeed all part of a wider swathe of Caledonian pine extending westwards through Ben Damph Estate to the woodlands of Ben Shielraig and Kinloch (A3.7).

B6.12 Regeneration within these enclosed areas was not particularly successful and in 2014 the area fenced has been extended to embrace a total enclosed area of 309.83 ha embracing all original enclosures and also the former separate enclosure at Allt nan Luib (below, paragraph B6.14). Areas have been mounded preparatory to planting, although due to the current moratorium on planting of pine, only selective planting of rowan and birch has been undertaken thus far to a total area of 34.8 ha.. Plans are in hand for planting of significant numbers of Caledonian pine of local provenance in 2015. Internal fences of former stand-alone enclosures now rendered redundant by the wider envelope of the new enclosure, have largely been removed.

B6.13 The pine woodlands of the south of Coulin are believed to be more closely related genetically to those of Achnashellach in the south (paragraph A3.8). Within Coulin, the surviving woodlands are concentrated around Stoney Bridge (grid reference NH 025532) and at Easan Dorcha. Existing fragments have been protected by deer-fencing; because regeneration at Easan Dorcha was considered rather slow, the re-establishment of pine in this site has been 'assisted' with a programme of deliberate planting of both pine and birch in a separate enclosure along the Coire Beinn Leithe. Further enclosures at Stoney Bridge, Doire Bheithe, Coire Crubaidh and New Bridge have been erected to protect new woodland creation schemes or restock planting. These are all establishing well.

B6.14 An extensive programme has also been undertaken in protection and promotion of predominantly broadleaved woodlands within the Estate, with a series of exclosures erected at Allt na Luib (in 1989) and at Leathad Mor (1992). As noted, enclosures at Allt nan Luib have now been included within the larger new enclosure linking this area and the Loch Clair pinewoods (paragraph B6.12).

B6.15 Finally, in its acquisition of the former northern part of Glencarron estate in 2002/03, Coulin acquired further woodland resources and restoration projects. There are significant areas of plantation woodland on the northeastern slopes of Coille Bhreac (NH078533) established in the early 1970s. While the eastern and southern boundaries remain effectively deer fenced (and adjoin new WGS schemes (below paragraph B6.17), the fences to the north have been reduced by removal of a couple of strands of wire, to allow access by deer.

B6.16 A larger block to the east of the main access track (NH095534) was also recently acquired by Coulin estate; this area consists of two successive plantings. The western section was established first and is now mature with fences not maintained and thus open to deer. The eastern part is younger and still vulnerable to deer damage; perimeter fences here and the dividing fence from the western block are thus maintained.

B6.17 Two new native woodland restoration blocks were established in 1999, one to the southeast of this older woodland block (NH082528) and one to its west, curling around the lower (north-facing) slopes of Coille Bhreac. Their combined area extends to 87 ha.

B6.18 Woodland areas (and proposals for future management) are described in more detail in the recent Coulin Estate Strategic Forest Plan. This suggests that overall, the land area of the estate embraces 8202.7 ha of open ground, 770.69 ha of native woodland and 443.6 ha of conifers.

Designated areas

B6.19 Coulin falls within the Wester Ross National Scenic Area and includes two distinct SSSIs, covering (largely the geomorphological interest of) Coire a' Chaud-Chnoic and the Coulin pinewoods SSSI (both northern and southern blocks). Parts of the Estate also fall within the Torridon Forest SSSI, and the Coulin pinewoods form part of the much larger Loch Maree Complex SAC, which also includes the Beinn Eighe and Torridon pinewoods. The SAC designation only covers the pinewoods in the vicinity of Loch Clair and the Allt na Luib and does not follow the SSSI designation into the Easan Dorcha pinewoods.

General Ecology

B6.20 Partly because of its conservational significance, the Estate has been particularly well-surveyed; although much of the survey work has been independently sponsored by the previous and the current owner (Mr F. Wills and the Hon. Philip Smith). In addition to SNH's own reports, mention should be made here of a report on the birds of Coulin (David Fairlamb, 1994; Coulin Estate - Breeding Birds Survey), the Woodland Management Plan and preliminary survey for Ghuibhais Mhor (April 1999); and a report on the fungi of Easan Dorcha by E.M. Holden (all held at the Estate Office). Since full details are documented in the original reports, a brief summary only is offered at this point.

B6.21 Coulin Forest is considered to be one of the richest pinewoods in Scotland for lichens, with 115 distinct species being recorded. The lichen community is well-developed and includes the nationally rare species *Siphula ceratites*; nationally scarce species include *Arthonia leucophellaea*, *Cavernularia hultenii*, *Chrysothrix chrysophthalma*, *Buellia erubescens*, *Conotrema homalotropum*, *Lecidea ochrococca*, *Thelotrema subtile*, *Platismatia norvegica*, *Chaenotheca chrysocephala*, *Wadeana minuta* and *Stenocybe bryophila*. The rare liverwort *Jungermannia leiantha* is also present in its only known Scottish site. 20 species of fungi were recorded in the Easan Dorcha pinewood alone in a survey carried out by SNH in 2000; these included two Red Data Book species *Cortinarius scaurus* and *Ombrophila violacea*

B6.22 Coulin supports populations of otter and pine marten, both protected species under the Wildlife and Countryside Act. Water voles (*Arvicola terrestris*) have been recorded to the south of the estate in the burn near Coire Crubaidh.

B6.23 Notable species of birds recorded as resident and/or breeding within the Estate include Black-throated diver (protected under Schedule 1 of the Wildlife and Countryside Act and listed in Annex 1 of the EC Birds Directive); Red-throated diver (similarly designated) and Common scoter are both present and considered probable breeding species. Breeding is also confirmed for Greenshank, for Scottish crossbill and for siskin and twite (both the latter breeding in some numbers). Redpoll are also confirmed as breeding on the Estate (against a national decline in numbers of this species). Peregrine are regular breeders with one territorial breeding site located on the northern crags of Sgurr Dubh. Golden eagles are resident and considered probably breeding within the Estate. Other possible breeding birds include Golden plover, wood sandpiper and merlin. Black grouse were recorded on the Estate regularly until 1990 but have not been recorded since; Crested tits were sighted in pines on the shores of Loch Clair in 1985 and 1993, but once again have not been recorded since that time. There are no other sightings reported from the West Ross area and the species is not thought to be resident.

B6.24 10 species of dragonfly have been recorded within the Coulin SSSI alone including three considered nationally rare or nationally scarce (the Northern Emerald, *Somatochlora artica*, the azure hawker, *Aeshna caerulea* and the white-faced darter, *Leucorrhinia dubia*). The site is also of regional importance for the rare beetle *Harmirius indulatus* a species specifically associated with native pinewoods; the beetles *Rhagium inquisitor* and *Xylita laevigata* are also present.

Objectives:

B6.25 Management at Coulin seeks to integrate sporting interests with conservation and especially with enhancing the Estate's native woodland cover. Sporting interests focus on deer stalking but In addition to these activities, salmon and sea trout fishing occurs on the River A'Ghairbe which forms part of the Ewe system. There are also numerous hill lochs located on the estate which offer trout fishing. The long term vision is to integrate this with restructuring of many of the Estate's exotic plantation and restoring significant areas of native woodland cover. The vision includes the ability for future management to sensitively harvest sustainable yields of timber, provide for healthy sporting deer herds and fish stocks and to maintain a place where present and future generations of owners and visitors alike can find enjoyment and inspiration.

B6.26 The Strategic Forest Plan notes that this will be achieved through integration of the following management objectives:

- ◆ Increasing the quality and extent of native woodland habitat through new woodland creation and through encouraging natural regeneration within existing woodland, thereby providing forest habitat networks both within the estate's woodlands and beyond into the neighbouring Beinn Eighe Natural Nature Reserve.
- ◆ Protecting the integrity of the native woodland habitat through the continued commitment of the removal of non-natives species, in particular *Rhododendron ponticum* and *Pinus contorta*.
- ◆ Maintaining a healthy sporting deer population, ensuring that adequate shelter remains available throughout the programme of restructuring and to ensure that the resulting restructuring will provide tangible benefits for sporting interests over the medium and long term.
- ◆ To continue to provide safe and enjoyable, informal visitor access across the estate.
- ◆ Where appropriate, to introduce silvicultural practices to facilitate the potential for modest yields of timber production.

B6.27 Alongside woodland expansion and restoration the Estate is also in the process of developing various hydroelectric power schemes. Planning permission has been received for 3 schemes, the largest of which will be at Easan Dorcha.

Deer populations:

B6.28 Spring counts of deer have been carried out on the main Estate each year; figures to 2008 are summarised in the previous South West Ross Deer Group Plan and are updated below:

	2008	2009	2010	2011	2012	2013	2014	2015
Stags	277	191	209	215	184	186	102	130
Hinds	358	411	407	406	391	409	349	280
Calves	116	147	160	160	108	136	74	40
Total	751	749	787	781	683	731	525	450

Average post-winter recruitment of red deer calves over the past 7 years has been of the order of 33%.

B6.29 Within the Estate, deer are concentrated to the south, central and eastern areas for the most part (as reflected clearly in the distribution of sightings in spring counts). Few if any animals appear hefted to the west of the Estate around Coire Granda, the western face of Sgurr Dubh or the Coire a' Chaud-Chnoic. The majority of beasts are concentrated around Meall an Leathaid Mhor, Cnoc Daimh or to the south around Meallan Doire Beithe; around Creag na Rianaich, Carn Dhomhnuill Mic, Moine Mor and An Leathad/Leathaid Doire Beithe.

B6.30 Within Coulin indeed there remains a pronounced zonation in deer densities north to south, with relatively few deer around the policies and the shores of Loch Clair. New fencing around the Loch Clair pines, and across to embrace the existing Allt na Luib enclosures (paragraph B6.12 above)

now effectively restricts deer to the higher ground of Sgurr Dubh, Sgorr nan Lochan Uaine, Beinn Liath Beag, but historically, densities have always remained quite low here - and in the northern north/western part of the estate more generally anyway. Few if any animals appear hefted to the western face of Sgurr Dubh or the Coire a' Chaud-Chnoic. Numbers were higher in the past towards the north-east with regular immigration through porous fencelines from Kinlochewe, but a new fence within a shared plantation up the march burn has now reduced thus ingress.

B6.31 Densities of deer are also low, towards the western march with Ben Damp Estate, around Coire Granda, but increasing densities of deer become apparent as one moves further south or east. The majority of beasts are concentrated around Meall an Leathaid Mhor, Cnoc Daimh or to the south around Meallan Doire Beithe; around Creag na Rianaich, Carn Dhomhnuill Mic, Moine Mor, An Leathad/Leathaid Doire Beithe and Coire Crubaidh.

B6.32 Stags in particular are heavily concentrated towards the southern end of the Estate especially along the high ground of Carn Breac and the Druim na Criche (where Coulin marches with Ledgowan). There is regular exchange to and fro across Carn Breac depending on wind and weather and some considerable movement across the march with North Achnashellach in the area of the Red Corrie (Coire an Uillt Dheirg). Wintering stags tend to congregate on the slopes of Leathad Coire Beithe to the south of Stoney Bridge.

B6.33 Hinds are perhaps more widely distributed (although densities are never high); as with stags, the main concentrations are in the core of the Estate (around the margins of the Torran Plantation and on the slopes of An Leathad) and in the south; in this southern section most of the hinds are towards the west, centred on the eastern slopes of Carn Breac and the Coire Crubaidh around Coille Bhan and in Coire Dubh-riabhach. A proportion of the grazings traditionally used by hinds in this area has actually been excluded from their range in the recent WGS fencing of Coille Bhreac.

B6.34 Roe are present at low densities and sika are now regularly encountered and shot.

Recent Management:

B6.35 Management objectives for the Estate, as above, are directed towards maintenance of a sporting Estate but with due regard to impacts of grazing on the vegetation and with a firm commitment to enhance environmental values where at all possible.

B6.36 In essence, the natural zonation of deer densities apparent within the Estate (here, paragraphs B6.29 – B6.31) lends itself to further exploitation as the best way to ensure effective integration of the proprietor's interests in Coulin as a sporting Estate with preservation and enhancement of its conservation value. It formed a cornerstone of policy to try to maintain this zonation of deer densities, effectively supporting the main conservational objectives of Coulin in preserving lower levels of browsing around the main sites of pine and broadleaved woodland regeneration, with the sporting interests of the Estate supported in the southern and eastern areas where deer are already more abundant. The only potential area of conflict here is around the areas of southern Caledonian pine of Easan Dorcha, Stoney Bridge and Doire Beithe - and these areas are already effectively fenced.

B6.37 Within such strategy, the Estate proposes to maintain a deer population which will support an annual stalking quota of 30-35 stags per year and up to 30 hinds. Over recent years, it has not been possible to achieve the target stag cull due to a lack of available sporting stags on the estate. Night shooting is used within the estate to control the deer numbers within the woodlands.

B6.38 Culls taken from the open hill are reported in the table below. Additional animals shot in woodlands are added in square brackets:

	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15
Stags	40	30 [9]	31 [4]	34 [2]	26	23	25	24
Hinds	28	26	14	1	13	13	9 [7]	15
Calves	21	17	7	0	3	3	7 [2]	9
Total	89	70 [9]	52 [4]	35 [2]	42	39	41 [9]	48

Small numbers of roe are also shot from within woodland areas and sika also shot when encountered. Since 2007/08 3 roe bucks and 4 does have been shot in total and 17 sika stags, 8 sika hinds and 5 calves.

B6.39 Winter feeding has traditionally been offered from November to March/April. Turnips and mineral energy blocks are provided to the south of Hill Park Plantation and in two additional sites, on the Doire Beithe and to the east of the Torran Plantation. This is for both supplementary and diversionary purposes, to keep the deer away from neighbouring SNH and FC ground and the public roads and to promote feeding away from the sensitive designated sites. Due to locations chosen, feed sites are primarily used by hinds rather than stags.

The stalkers undertake a small amount of heather burning now and again, but this is not on a regular or consistent programme; the last two patches burnt were in response to damage by heather-beetle.

Assessment and Issues to be considered in planning future management:

B6.40 It is clear that grazing impact increases with distance away from Loch Clair and from Coulin Lodge and policies. Even areas subject to heaviest pressure are not in practice particularly heavily grazed. [Based on average numbers counted over the past 7 years overall densities are only of the order of 8 deer per 100 ha (6 per 100 ha based on 2014 counts)]. Thus even within areas of heavier grazing, impact is patchy, with some areas of light to moderate impact amongst patches of sustained and heavy impact. As assessed by density of heather (and growth form) as well as abundance of *Vaccinium* interspersed amongst the heather clumps above, overall impact would not appear excessive, even if heavy in some areas -and the patchwork of pressure even within the more heavily grazed areas, promotes spatial heterogeneity and thus greater diversity of habitat structure and biodiversity.

B6.41 Assessments of impact in Woodland areas noted as part of the Strategic Forest Plan are also recorded for the most part as light, with little browsing impact on saplings or more established trees. Despite this, levels of regeneration, particularly of Caledonian pine, recorded by SNH during recent assessments within designated SSSIs/SAC, consistently fail to reach national standards for 'favourable condition' - both around Loch Clair and in the area of pine at Easan Dorcha. Site condition monitoring carried out between 2003 and 2006, indicated that the native pinewood feature and the lichen assemblage features of the Coulin Pinewood SSSI were in an unfavourable condition, due mainly to continued presence of rhododendron and a lack of regeneration. As well as lack of regeneration of Caledonian pine itself, the lack of rowan regeneration is of particular concern for the lichen assemblage as the Lobarion lichen community is supported by mature rowans (SNH, 2010).

B6.42 A recent and comprehensive review by Neil Mackenzie (2007), while acknowledging that some regeneration was occurring noted, that despite the establishment of seedlings even outwith enclosure fences, leader damage was recorded in between 31% and 51% of all seedlings recorded at or below the height of the ground vegetation and few if any seedlings were surviving undamaged to the sapling stage. [Mackenzie, N. (2007) **A Woodland Profile Survey and Assessment of Current Herbivore Impacts for Coulin Pinewood SSSI**. Report to SNH, ROAME No. RO6AC208]

B6.43 The Statutory authorities (SNH, FCS) have reviewed with the Estate the Joint Agencies' position in February 2011 in an attempt to find appropriate solution and it is largely in response to this that an extended area has been enclosed to the west of Loch Clair and ground preparation has been undertaken towards active planting of pine and native broadleaves (notably birch and rowan, with pine to be supplied by SNH for planting in 2015).

B6.44 It is recognised by the Agencies that reduction of deer presence around Easan Dorcha and Stoney Bridge would have a much more immediate effect on the Estate's ability to fulfil its sporting objectives and might seriously compromise the Estate's ability to maintain existing quotas (and in consequence have an actual impact upon capital values). Here it is suggested that the only appropriate course of action to extend woodland resources in the area is to maintain and extend enclosures. Additional enclosure and planting is indeed now proposed in the Estate's Strategic Forest Plan although unlike that at Loch Clair, this additional enclosure has not yet been undertaken; it is however scheduled to occur within the period 2015-2020.

B6.45 Over recent years there has been noted a significant decline in numbers of stags on the property and culls have been reduced accordingly. It is believed that the decline in stag numbers is a function of increased levels of sporting and forest protection culls on neighbouring Estates, reducing the overall deer population in this part of the Management Area; this remains an issue of serious concern. While hind numbers currently remain somewhat higher than those needed to sustain a sporting quota between 30 and 35 mature stags, this has been deliberate policy in the hopes of delivering higher levels of recruitment and injecting more stag calves into the population to try and restore former, larger, stag numbers. This has not to date proved especially successful, and the Estate proposes to reduce hind numbers significantly, while consciously retaining slightly higher numbers than technically required, in order to achieve a higher recruitment of calves to the depleted stag population.

B7 Kinlochdamph

Description

B7.1 Formerly known as Glasnock Estate (and referred to by that name in the South West Ross Group Plan 2009-2014) Kinlochdamph was formally separated from Lochcarron Estate in 2008, with 1633 hectares to the north of that former Estate sold to Mr Mark Adams. This new Estate marches to the north with Ben Shielraig and Ben Damph and some part of Fionnaraich and to the east with Tullich. Additional land has since been added to the Estate with the acquisition of Kinlochdamph Lodge and surrounding policies in 2009 and registration of additional unwarranted areas to the east in 2012.

B7.2 The eastern march runs north from the confluence of the Allt Doire nan Leac with the Abhainn Bhuachaig to the Coire Mhic-Fhearghais and the Loch a'Mhuilinn. From this point the march turns back northwest to the meeting point of the three Estates (Kinlochdamph, Tullich and Ben Damph) between the Carn Cadh an Eididh and the Ruadh Stac Beag before following the Allt Coire nan Cadhan back to its confluence with the Abhainn Dearg in Strath a' Bhathaich, thence following Abhainn Dearg back to Loch Damph.

B7.3 From here south, the march skirts the Moine Mor to the Allt a' Ghuibhais (grid reference NG 870459) before running southwest through the woodland block to NG 863454. The southern boundary, with Lochcarron Estate, runs from here past the western limits of the Coille Dubh to Cadha nam Faidh Cadha, and then broadly due east across the Sgurr a' Gharaidh to the northern flanks of Glas Bheinn (for detail see also Lochcarron Estate: B9.2, B9.3). [Map 1]

B7.4 The bulk of the ground overlies Torridonian sandstones and has vegetation typical of the wider Wester Ross area: the familiar mix of wet heath and blanket mires dominated by a mixture of deer

grass (*Scirpus cespitosus*), ling and bell heather (*Calluna vulgaris* and *Erica tetralix*), together with *Molinia caerulea*. Where the ground is less-well drained and peat has accumulated there also develop extensive tracts of deer grass/cotton grass blanket bog (*Scirpus cespitosus* - *Eriophorum vaginatum* mire). More exposed areas with thinner soils and high plateaux support a more montane vegetation type with hummocks of *Racomitrium* moss and *Cladonia* lichens, and widespread development of clubmoss (*Lycopodium* species).

B7.5 Like Lochcarron Estate however, Kinlochdamph is bisected by a thrust of Durness limestone which supports areas of more species-rich grasslands and there are excellent grazings to the east associated with the corrie of Allt a Ghiubhais and the surrounding "Green Hills". This supports a more productive vegetation overall and also a somewhat different array of species more associated with limestone. The limestone pavements and pavement grasslands are of especial significance in this largely acid region and are designated as a Site of Special Scientific Interest (SSSI; designated 1985) within the wider Rassal Special Area of Conservation (SAC; designated March 2005).

B7.6 A number of woodland restoration schemes have been established within the Estate. A large scheme [approx 140 ha]. was established in 1994 at the northern end of the Rassal SSSI, at Coille Dubh ("The Birches"), designed to protect and encourage regeneration of the existing native broadleaved woodland in that area. [This was extended in 1995 to include an additional block at Allt Beag, but this section was retained by Lochcarron estate following separation of Kinlochdamph in 2008]. A further native woodland scheme of 164 ha. (Druim Dubh) was established in 1997 on the north bank of the Allt a'Ghiubhais at the foot of the Coire Dubh. These are now opened to deer.

Designated sites:

B7.7 Both the Coille Dubh and Druim Dubh woodland areas fall within the Rassal Site of Special Scientific Interest (SSSI) as does the open hill ground to the south and west of these woodland blocks. The Coille Dubh woodlands in particular are considered of particular importance for mosses and liverworts, as are the heaths on the north face of Sgurr a' Gharaidh, and gorges of the Allt a' Ghiubhais and Allt Mor. The lichen flora associated with the woodland is of particular interest supporting 46 nationally rare and 15 nationally scarce species including the largest population in the British Isles of *Leptogium saturninum* and *Wadeana minuta* and the most northerly population of *Pannaria ignobilis*; in all a total of 304 lichen species have been recorded in the woodland and 365 within the SSSI overall. The ground flora contains a wide range of typical woodland species such as primrose, wild strawberry and sanicle as well as a number of plants of very restricted distribution like dark-red helleborine.

B7.8 The upper parts of the site consist of a complex of numerous exposures of limestone amid a matrix of more acid grassland and moorland. Typical upland plants include large populations of holly fern and mountain avens. Nationally rare plants include rock sedge and in gullies and crevices there are areas of montane willow scrub. The upland assemblage reflects the presence of a mosaic of other habitat types associated with the limestone. These include alkaline fens, calcareous grassland, rocky slopes, spring heads and sub alpine flushes.

B7.9 Designated features of the site include

Upland mixed ash woodland (gorge woodland); Mixed woodland on base-rich soils associated with rocky slopes; Limestone pavement; Plants in crevices on base-rich rocks, Alpine and subalpine calcareous grassland; Upland assemblage; Bryophyte assemblage; Lichen assemblage; Mountain willow scrub; Base-rich fens; - although some of these habitats feature more prominently within the Lochcarron Estate part of the overall site.

Objectives:

B7.10 Kinlochdamph is managed primarily as a sporting Estate with stalking of both red and roe deer, although management seeks to be sensitive to conservation interests and to safeguard the conservation status of designated features within the SSSI/SAC.

Deer Populations:

B7.11 Hinds are generally fairly widely distributed across the area, although populations have in the past tended to be rather mobile, with many groups hefted close to the march with Tullich and thus, with much exchange between Kinlochdamph and Tullich on an almost daily basis dependent on wind and weather conditions. To the south there has also in the past been considerable movement of both stags and hinds between Kinlochdamph and Lochcarron Estate.

B7.12 This has resulted in part from the fact that much of the lower ground has been inaccessible behind the fences of the Coille Dubh and Druim Dubh woodland enclosures. More recently, these have been opened again allowing access to deer which may result in a significant change in distribution and residency within the Estate. Significant numbers of hinds are also established in the corrie of Allt a Ghiubhais and the surrounding “Green Hills” and there are also smaller populations hefted within the corries of Carn Cadh an Eididh, northwest of the Gorm Lochs.

B7.13 Despite some resident stags, stalking has always been at least in part dependent on an influx of stags in season, drawing in largely from Lochcarron or from Ben Damph, or drawn through Tullich.

B7.14 Numbers recorded in late winter counts until 2008 are reported in the previous South West Ross Deer Management Plan [2009-2014]. Figures are updated here and underline again the fact that populations are highly mobile and may be on Kinlochdamph on the day of the count in some years, or across the march on neighbouring ground on others.

Spring/End of winter counts [April]

	2009	2010	2011	2012	2013	2014
Stags	14			4		5
Hinds	191			119		136
Calves	64			34		46
Total	269			157		187

Late summer (August) counts record

	2009	2010	2011	2012	2013	2014	2015*
Stags	31		2	28		8	6
Hinds	102		42	160	101	189	93
Calves	47		21	62	49	65	16
Total	180		65	250	150	262	115

* due to poor weather conditions the count of August 2015 was likely to have been incomplete

Recent Past Management

B7.15 In response to concerns about herbivore impacts within the Rassal SSSI (paragraph B7.23 below), SNH subsequently sought agreement to a Collaborative Upland Habitat Management Plan for the Rassal site in 2010 involving the Strath Discretionary Trust (Lochcarron Estate) and Donald MacCuish (crofting tenant) and well as Kinlochdamph [Glasnock] and Tullich.

B7.16 Undertakings by Kinlochdamph included increased targeting of cull effort directly within the SAC (thus reducing local densities here through a combination of actual cull mortality and disturbance) and through a series of measures designed to reduce the amount of time spent within the SAC area by remaining deer populations, by providing alternative shelter and foraging opportunities elsewhere (outwith the SAC).

B7.17 As already noted, both woodland blocks established in the 1990s at Coille Dubh and Druim Dubh have been opened to deer (paragraph B7.12). This decision was made in part in response to a need to reduce grazing impacts within the wider SSSI (especially on limestone pavements and other montane habitats) but also in the expectation that allowing access to the woodlands would also be of benefit to the Estate itself in helping both to try and retain greater control of resident hind populations and to try and build up a greater residency of summer stags, in order to reduce dependence for stalking on an influx of stags after the breakout.

B7.18 Within the Rassal CUHMP, the Estate also proposed to establish parts of the property outwith the SSSI as a sanctuary in order to try and increase the proportion of time the cross-border population spends resident within this productive area. It is anticipated that establishing an undisturbed sanctuary would draw animals across to Kinlochdamph from the adjacent areas of Tullich (within the SAC) as well as drawing increasing use of the area by animals more usually resident within the SAC area on Kinlochdamph itself. Initially proposed for the Green Hills, the sanctuary was subsequently established further to the north in the area around Carn Cadh an Eididh as being further from the SSSI boundary.

B7.19 Much of the stalking both for stags and hinds is concentrated on the faces of Sgurr a Gharaigh as a further mechanism to try and reduce grazing/trampling impacts within the more sensitive areas within the SSSI. Stags are still present on the ground primarily only after the breakout and thus stalking is largely restricted to the last 4 weeks of the season.

B7.20 Culls taken are reported as:

	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15
Stags	15		11	10	13	14	18	20
Hinds	15		9	11	12	20	14	25
Calves	6		3	5	5	5	10	8
Total	36		23	26	30	39	42	63

Management intends to stabilise at a stag cull of between 15 and 20 per annum, with 20 as a maximum limit.

B7.21 The hill track through the centre of the Estate has been refurbished and extended, with permission from Scottish Natural Heritage, into the Green Hills area to the Bealach a' Glas-Chnoic. Supplementary feeding is now provided over winter as turnips and in the form of feed-enhancer licks, around the Lodge and on either side of this track. No supplementary feeding takes place within the SSSI.

Assessments and issues for consideration in relation to future management:

B7.22 As at paragraph B7.7 –B7.9 the woodlands at Coille Dubh (“The Birches”) and on the north bank of the Allt a'Ghiubhais at the foot of the Coire Dubh fall within the wider Rassal (SSSI) as does the open hill ground to the south and west of these woodland blocks. While the woodland areas are not assessed as in unfavourable condition, concerns have been expressed about impacts on upland habitats and particularly the limestone pavements and subalpine calcareous grasslands.

B7.23 Routine Site Condition Monitoring carried by SNH in 2004 and 2007 suggested that a number of designated features within the site failed to reach criteria established for “Favourable Condition” (A5.8-A5.9) – notably recording significant areas suffering from excessive impacts (grazing/trampling) from deer and/or livestock. Features deemed unfavourable included: subalpine calcareous grassland, limestone pavement, mountain willow scrub and the general upland assemblage. SNH subsequently sought agreement to a wider Collaborative Upland Habitat Management Plan for the Rassal site in 2010 involving the Strath Discretionary Trust (Lochcarron Estate) and Donald MacCuish (crofting tenant) and well as Kinlochdamph [Glasnock] and Tullich. Undertakings by Kinlochdamph are summarised in paragraphs B7.16 – B7.19 above

B7.24 It is clear that opening of the two woodland enclosures at Coille Dubh and Druim Dubh posed a potential risk of attracting excessive impacts on the developing woodland itself. Informal assessments by the owner suggest that, despite the fact that these areas are increasingly colonised by hinds, to date no damaging impacts are being encountered.

B7.25 In combination, measures undertaken are considered appropriate to reducing the impacts on the calcareous grasslands and limestone pavement interests on the site as highlighted by the habitat impact assessment of Halcrow (2008). Indeed the most recent assessments carried out on 2015 (Colin Wells: here, paragraphs A5.10-A5.12) report “ Most areas of what I would regard as 'genuine' pavement, on the higher central and eastern sectors of the site were in good condition .” In practice, “ calcareous grassland and limestone pavement will be classed as having failed the assessment; however, the former will be because of a variety of indicators relating to historically-prolonged grazing, mostly by sheep, and the latter because of a technical issue relating to inadequate indicator species options and also because many of the sample sites (derived from the 2008 HIA waypoints for this feature) were situated on 'marginal' pavement in the lower, western part of the SSSI (in many cases simply small rock outcrops rather than true pavement). Thus none of these latter ‘failures’ have any real implications in relation to future management of deer populations across the area.

B7.26 However, deer numbers remain too high for montane willow to expand beyond inaccessible locations and due to their attractiveness to browsers, particularly in the winter months, these montane willows may require additional measures to ensure the viability of the populations.

B7.27 It is not clear what the implication of these results may be in terms of revised management although SNH advise that since the provisions/actions set out in the current CUHMP are not addressing all issues of concern there may be need for further discussions with all Estates concerned (see para B9.33).

B7.28 Despite the success of initiatives undertaken to try to establish greater residency of hinds on Kinlochdamph, it is recognised that the property remains largely hind-ground and there are few resident stags (paragraph B7.13). It is recognised that a number of neighbouring Estates in this part of the Management Area (Lochcarron, Kinlochdamph, Couldoran, Tullich and Glen Mhor) are dependent on the same shared stag population and it is recognised that close collaboration is required to ensure that combined harvest rates are indeed sustainable within this subpopulation.

B7.29 Conscious of the need to ‘put back into the pot’ sufficient new recruits (stag calves to grow on within the wider stag population) to replace those harvested at maturity on Kinlochdamph, the Estate seeks to maintain a hind population of the order of 150-180. Careful monitoring of numbers and distribution will be undertaken to ensure that impacts do not rise within the SSSI . It is noted however that the additional impacts imposed in the past from grazing of wandering sheep are likely to have been significantly reduced over recent years.

B8 Tullich Estate

Description:

B8.1 Tullich Estate (2382 acres; 964 ha) occupies a strategic position in the Lochcarron section of the Group Management Area. It is bordered to the southwest by Lochcarron Estate, to the true west by Glen Mhor, to the northwest by Lochcarron Estate, to the north by Kinlochdamph and to the east by New Kelso. Its higher slopes represent the south-facing slopes of the limestone ridge which forms its boundary with Kinlochdamph to the north; the lower ground returns to the more acid Torridonian condition, but in practice much of this lower ground too, particularly below the house and to the east, has been improved and is fenced as sheep pasture. The vegetation is similar to that described elsewhere within the immediate area (as for example the open ground of the eastern parts of Lochcarron)

B8.2 As noted in the 2009 Plan, Tullich House together with approximately 120 acres of ground formerly belonging to the Estate were sold into private ownership in 2005. This sale included a number of woodland restoration exclosures erected in 1990/91 to the west and south of the house and some 40 acres of sheep parks. Stock-fencing around these parks has subsequently been upgraded to deer fencing, excluding deer from the hill range (which formerly made some extensive use of these improved grasslands over the winter period). No sheep have been run on the open hill ground of Tullich since 1994.

B8.3 A further woodland restoration area was fenced in 1994/5 to the northeast of Allt nan Carnan, with fences linking to the top fence of Kirkton Wood and to the fences of Glen Mhor Estate in the west. Planting in this area was not however particularly successful and although the area has been 'beaten up' repeatedly, only relatively few trees have become established. By agreement with the Forestry Commission, the scheme has been closed. Although the Estate's own fences remain intact (and are of considerable significance in influencing deer movements in the area), it is understood that fences on the Glen Mhor side are no longer complete, so that this section of ground, while fenced out from the rest of Tullich is now continuous with Glen Mhor. Deer undoubtedly make use of the area and it is recorded in the NWSoS as showing heavy impacts [Map7]. However, as noted the scheme has been closed/abandoned and perhaps should not have been included in that later survey.

B8.4 As widely in this area, there are also a few relict fragments of native broadleaved woodland scattered within the Estate, but such woodland fragments are restricted to more inaccessible areas such as deep gullies or gorges. The upper part of the Allt nan Carnan Gorge SSSI (paragraphs A3.16-A3.17) falls within Tullich ground (and is protected to a degree by the WGS fencing in that area, above); there are also notable (unfenced) woodland fragments associated with the gully of the Abhainn Bhuachaig.

Deer populations:

B8.5 As noted above, no sheep have been run on the open hill ground of Tullich since 1994. Late winter counts of red deer over recent years (largely carried out by the Pattinsons at Couldoran/Lochcarron, and Tom Chetwynd, in association with counts on the neighbouring properties) are summarised below:

Spring/End of winter counts [April]

	2009	2010	2011	2012	2013	2014
Stags	13			21	11	60
Hinds	73			22	142	143
Calves	34			7	62	52
Total	120			50	215	255

Late summer (August) counts record

	2009	2010	2011	2012	2013	2014	2015
Stags	8	28	19	50	0	1	3
Hinds	72	165	50	87	101	68	35
Calves	30	27	25	20	49	28	7
Total	110	220	94	157	150	97	45

B8.6 The high variability of counts between spring and summer and between years emphasise the high mobility emphasise the difficulty of returning consistent assessments of numbers in small Estates such as this where there may be regular movement of animals to and fro across the marches of neighbouring properties, dependent on weather conditions and stalking pressure. However it is clear that Tullich should be considered primarily as a hind forest, with few wintering stags. Numbers of hinds 'resident' within the Estate are hard to estimate with any accuracy, but we may probably presume a population of between 70 and 100 animals. It is normal to see 70 – 90 hinds plus calves in various groups throughout the summer stalking season, regardless of where the hinds have wintered or the weather conditions prevalent on the day.

B8.7 Many of these hinds are hefted in home ranges close to boundaries of the estate and there is regular movement of animals across these marches. In effect, Tullich's hinds can be considered as two distinct populations: one, to the north and west which is largely shared with Lochcarron, Kinlochdamp and Glen Mhor, and a distinct grouping of hinds on the lower ground to the east, which move freely between Tullich and New Kelso/Fionnaraich.

Recent Past Management

B8.8 As previously, the proprietors of Tullich (now the Hon. Richard Curzon) do not in general retain stalking to themselves, but lease it. Formerly taken by the Pattinsons at Couldoran/Lochcarron, stalking has more recently been taken by Mr Tom Chetwynd.

B8.9 Cull figures reported by the Estate over recent years are:

	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15
Stags	8	6	4	6	4	4	6	7
Hinds	23	8	6	5	11	10	8	20
Calves	15	3	3	3	4	4	6	7
Total	36	17	13	14	15	13	18	34

The hind cull was stepped up in 2014 – 15 to take account of increased numbers recorded in the spring counts undertaken in 2013 and 2014. Occasional roe deer have been seen but not shot though numbers remain low.

Assessments and issues for consideration:

B8.10 A small part of Tullich falls within the Rassall SSSI/SAC, but of more significance, populations of deer in this area move freely between Kinlochdamp, Tullich (and to a lesser extent) Lochcarron Estate. Thus any impacts from deer reported within the designated area come from a population which in effect is free-moving between all properties

B8.11 Routine Site Condition Monitoring carried by SNH has suggested that a number of designated features within the site failed to reach criteria established for "Favourable Condition" – notably recording significant areas suffering from excessive impacts (grazing/trampling) from deer and/or livestock. Features deemed unfavourable included: subalpine calcareous grassland, limestone pavement, mountain willow scrub and the general upland assemblage. In response to this an independent assessment of herbivore impacts was carried out on three representative Natura habitats

in August 2008 (Halcrow 2008). The survey report indicated that the browsing impacts varied across the site relating to the mixture of livestock and deer utilising the site and the sensitivity of the different habitats.

B8.12 SNH subsequently sought agreement to a wider Collaborative Upland Habitat Management Plan for the Rassal site in 2010 involving the Strath Discretionary Trust (Lochcarron Estate) and Donald MacCuish (crofting tenant) and well as Kinlochdamph and Tullich (above paragraphs B7.15-B7.26). The most recent review of herbivore impacts (Paragraphs A5.10-A5.12) suggest some improvement to designated features of the site, but also indicate that some features remain in unfavourable condition. It is not clear what the implication of these results may be in terms of revised management although SNH advise that since the provisions/actions set out in the current CUHMP are not addressing all issues of concern there may be need for further discussions with all Estates concerned (see below at paragraph B9.34).

B8.13 Part of the Allt nan Carnan Gorge SSSI also falls within Tullich lying as it does on the march between Tullich and Lochcarron Estate. Site Condition Monitoring of the **Allt na Carnan Gorge** in 2001 also assessed this site as unfavourable, although this was largely due to presence within the SSSI of non-native tree species. Although some browsing and tracking impacts were previously recorded in more accessible areas of the upper part of the gorge, fencing associated with the Woodland Scheme established close by (paragraph B8.3) would appear to have reduced these impacts. It is noted that the intensity of grazing/browsing appears to have decreased in recent years allowing some expansion of the woodland into adjacent open ground. It would appear therefore that any concerns about the condition of this site do not put explicit pressure on deer management decisions.

B8.14 A number of other management and other changes have affected deer populations on Tullich and their distribution over recent years. Deer fencing of the sheep parks on the lower ground has resulted in an overall loss of winter grazing for hinds hefted in this eastern side of the ground. This has in turn tended to result in a seasonal displacement of hinds formerly wintering in this area, eastwards onto New Kelso and Fionnaraich. This, in itself is not necessarily a problem (as long as hind numbers in area overall are not affected enough to significantly reduce overall levels of recruitment of calves in the local area, it does not necessarily matter where, geographically, these hinds are located). But if numbers of hinds spending the summer on this part of Tullich do decline, it may reduce the number of stags drawn to the ground, in season.

B8.15 There does indeed seem to have been a reduction in shootable stags observed over recent seasons, reflected in a significant decline in harvests taken. Future management might seek to address these concerns by undertaking appropriate vegetational management on the hill ground (muirburn) in an attempt to make the hill grazings on Tullich more attractive.

B8.16 Comment was also made in the past about possible impacts of any future changes of management of Kirkton Wood, recently transferred to the ownership of the Kirkton Woodland Heritage Group. Fences, while still sound, have been undermined in places and the wood as a whole clearly acts as cover/harbourage for a significant population of deer. Such is the strategic position of this wood on the borders between Tullich and Lochcarron Estates, that from this central harbourage, the deer can at present move freely on to any of the neighbouring Estates. It is noted therefore that plans for future management of the area thus may have considerable implications for deer populations in this area.

B9 Lochcarron Estate

B9.1 Lochcarron Estate embraces an area of 3220 ha of land thereabouts with a section east and north of the A896 between Glen Mhor and Kinlochdamp and a separate landholding to the south of Glen Mhor within the Strome peninsula.

B9.2 The current boundary of the northern section runs north west from the cattle grid which marks the western march of Glen Mhor Estate (NG 848403), along the border of the forestry plantation, thereafter (always with Glen Mhor to the south) striking east north east along the edge of the woodland restoration scheme at Torr na Press, across the Cearcall Dubh, north of Loch na Caillich, following the high ground. Southeast of Lochan Bruar (the loch nearest to summit point at NG 877429) the march continues over the summit and down to the burn following this east to the Allt a Chuirn and thence following this northwest to NG895440 before following the old metal fence line to top of Craig na h-Iolaire.

B9.3 From here, with Kinlochdamp to the north, the march runs west along the north side of Sgurr na Garaidh and north of Cadha nam Faidh, to meet the old wall then following the wall northwest down to the woodland at Coille Dubh. From here the march follows the inner fence line down hill to Allt a Ghiubhais, crosses this and then follows a line on the east of the Spy Hut ridge to the policies at Kinloch Damp, before turning west and following the old fence line to Abhainn Dubh. The march then follows the burn upstream but 5m back from the East bank to Lochs Loine and Coultrie again 5m back from the bank to meet with the A896 and thence back to Kishorn. [Map 1]

B9.4 The Pattinson family also own and manage a separate piece of ground on North Strome (referred to in the 2002 Plan as Lochcarron). This land (included within the 3220 ha total above) includes the bulk of the North Strome peninsula [except the former Forestry Commission lands of North Strome, now owned by Charlie Anderson, and Carronach now owned by Jim Gatwood] and includes the village of Lochcarron itself. Much of this section of the Estate consists of residential area and croft land, or is the subject of Common grazings; however there remain stalking rights over the open hill ground of North Strome. As noted there are in the area a number of commercial conifer plantations in the area formerly managed by the Forestry Commission/Forest Enterprise but now in (separate) private ownership (paragraphs A4.3).

B9.5 The main part of Lochcarron Estate overlies a more varied geology than described for other parts of the Management Area to this point. While part indeed is of the more widespread Torridonian sandstone (as is the separate section within North Strome), much of the ground east of the A896 is on a ridge of limestone: part of the Durness limestone of the Moine series of intrusions into the Torridonian beds. This supports a more productive vegetation overall and also a somewhat different array of species more associated with limestone. This has implications both in terms of the quality of the ground for deer - and its wider conservation value.

Vegetation and Ecology:

B9.6 The vegetation of Lochcarron and reflects the varied geology. Open ground of the managed area in North Strome consists largely of the common grazings of North Strome peninsula and the open plateau around the Allt nan Carnan gorge, between the Kishorn road and Kirkton Wood. This is on the more acid, Torridonian, geology typical of the area in general.

B9.7 Over all this area, the vegetation is similar to that described more generally for Wester Ross : a mixture of wet heath and blanket mires dominated by wet or humid grass-heaths with a mixture of deer grass (*Scirpus cespitosus*), ling and bell heather (*Calluna vulgaris* and *Erica tetralix*), together with *Molinia caerulea*. Where the ground is less-well drained and peat has accumulated there also develop extensive tracts of deer grass/cotton grass blanket bog (*Scirpus cespitosus* - *Eriophorum vaginatum* mire); in places

where the vegetation is relatively undisturbed there may be widespread development of *Sphagnum* moss and other bryophytes.

B9.8 More exposed areas with thinner soils and high plateaux support a more montane vegetation type with hummocks of *Racomitrium* moss and *Cladonia* lichens, and widespread development of clubmoss (*Lycopodium* species).

B9.9 As noted there are in the area a number of commercial conifer plantations in the area formerly managed by the Forestry Commission/Forest Enterprise but now in (separate)) private ownership. In addition, the native woodlands of Allt nan Carnan gorge are particularly notable and are covered by an SSSI designation.

B9.10 Much of the vegetation of the main part of the Estate (bordering Glen Mhor, Tullich and Kinlochdamph) conforms to this same 'style' of grass heath, blanket mire and alpine/subalpine lichen/moss communities, but there are more extensive areas of more species-rich grasslands associated with streamsides and shallower soils on the limestone. At Rassal, there are extensive limestone pavements and an area of calcareous ash woodland. The limestone pavements and pavement grasslands are of especial significance in this largely acid region and support a range of interesting lower plants, while at Rassal, the underlying limestone supports the most northerly ash woodland in the UK. The ash woodland and the wider area of the limestone ridge are both protected as SSSIs.

B9.11 A number of other native woodland schemes have been established within the Estate. Of particular significance in our considerations is a large scheme (of 320 ha) established at Tornapress (grid reference 840420). In addition, two native woodland schemes were established to the north of the Estate in 1994 and 1997 at Coille Dubh and Druim Dubh within the Rassal SSSI; it is noted that an extension to the Coille Dubh woodland restoration scheme (15 ha; established in 1997 at Allt Beag) has remained in the ownership of the Estate, although the remainder has now been sold (Kinlochdamph). Finally, an area of 116.17 ha of ground to the east of Loch Coultrie and Lochan-Loin and against the western march of Kinlochdamph Estate [Moine Mhor] has more recently been fenced (2011) and planted with a mixture of native woodland species (predominantly downy birch and rowan)

B9.12 An old plantation of c 42 ha of Lodgepole pine is present at the boundary with Glen Mhor Estate, at Sanachan (NG 845405). This is currently being felled although works have been temporarily interrupted due to boggy conditions and since that time there has been considerable further loss to wind-blow. The site has recently been refenced however to stop deer drawing down from the estate onto Seafeld Farm or on into Achintraid. For practical reasons the area has been fenced down the western side (thus within the Estate and not on the eastern march with Glen Mhor) and then along the road frontage to link with the Glen Mhor fence at the cattle grid. The fence at the western side in turn links to the existing deer fence at Tornapress.

B9.13 Crofters Donnie and Iain McCuish hold a 150 acre (60) croft towards Glasnock and have tenancy of a further 700 acres (280 ha) of the Estate between Rassal Ashwood and Coille Dubh. The limit of the tenanted ground, which all lies within the SSSI, is defined by an old stock fence and the croft's livestock are indeed usually restricted to the ground below this fenceline. Under the terms of a recently negotiated Stewardship Scheme, stock numbers are limited to 310 ewes and their followers and 15 cattle.

Designations:

B9.14 There are two areas designated as SSSIs: at Rassal and in the Allt nan Carnan gorge (paragraphs A3.10 –A3.17); parts of both were also formerly National Nature Reserves (although both areas have recently been de-declared). Rassal (which extends beyond the boundary of the Estate and also embraces parts of Kinlochdamph Estate) has recently also been included as a part of the Loch Maree Complex SAC

B9.15 **Rassal** contains the largest exposure of Durness limestone in Wester Ross. The underlying geology gives rise to a diversity of habitats limestone pavement, limestone grasslands, and flush and mire communities as well as the most northerly example of ash woodland in the UK (A3.10- A3.15).

B9.16 The lichen flora of Rassal is of particular interest and the ashwood supports the largest populations in the British Isles of *Leptogium saturninum* (considered Vulnerable in the Red Data Book classification scheme) and *Wadeana minuta* (nationally scarce). In total 8 nationally rare and 46 nationally scarce species occur on the site. Rassal supports a rich, and internationally important, flora of mosses and liverworts, and 220 species have been recorded. Of these, two are nationally rare and seventeen are nationally scarce. Considered of particular importance for mosses and liverworts are the woodland at Coille Dhubh, the heaths on the north face of Sgurr a' Gharaidh, and gorges of the Allt a' Ghuibhais and Allt Mor. [Further details of these surveys are provided in reports by B. and S. Coppins, with V. Giavarini 1999, **Survey of the lichens of Rassal NNR and SSSI**; Scottish Natural Heritage; B.Averis, 2000, **Survey of the Bryophytes of Rassal NNR and SSSI**; Scottish Natural Heritage.]

B9.17 The boundary of the Reserve was extended in 1967 to include a section of the Allt Mor Gorge, which supports good examples of ash and wych elm gorge woodland. In 1990, a fenced corridor linking the gorge woodland to the main ash-hazel wood of Rassal was established. There is some complexity of management of the site however in that a large part of the designated area falls within land held under crofting tenancy (60 ha.) or under formal agricultural lease (an additional 285 ha).

B9.18 **Allt nan Carnan** is a wooded gorge approximately 3.5km in length, running north from the western end of Lochcarron village. The gorge cuts through rocks of the Moine schists which influence its woodland and ground flora. The site contains a range of native trees characteristic of the nutrient-poor acidic soils. The woodland in the lower gorge is classified as upland sessile oak woodland (paragraph A3.16).

Deer populations and Recent Management:

B9.19 No formal counts are carried out of the deer of North Strome, which has not hitherto been considered part of the potential stalking ground due to the large proportion occupied by built up areas or managed by Forestry Commission Scotland.

B9.20 Very regular counts are undertaken of deer populations on the main Lochcarron Estate. Figures to 2008 are included in the previous South West Ross Deer Management Plan and are updated here as:

End of winter counts [April]

	2008	2009	2010	2011	2012	2013	2014
Stags	48	5			8		12
Hinds	14	8			25		69
Calves	1	4			8		29
Total	63	17			41		110

Summer Counts [August]

	2008	2009	2010	2011	2012	2013	2014	2015*
Stags		68	112	22	17	26	38	6
Hinds		47	128	16	30	56	32	29
Calves		22	84	6	9	35	18	6
Total		127	324	44	56	117	88	41

* due to poor weather conditions the count of August 2015 was likely to have been incomplete

B9.21 It is clear that there is extensive movement of animals between Lochcarron and its neighbouring properties of Kinlochdamph and Glen Mhor as well as considerable exchange of hinds across the march to neighbouring Tullich dependent on wind and weather conditions. These figures for Lochcarron in isolation are thus perhaps unrepresentative, representing part-only of a truly shared population of hinds. Winter populations of stags are perhaps a fairer reflection of a truly resident population, with increasing numbers established over the past ten years or so around Courthill.

B9.22 Average post-winter recruitment rates derived from the counts above are on average 36% (or 36 surviving calves per 100 hinds).

B9.23 Culls taken are reported as:

	07/08	08/09*	09/10	10/11	11/12	12/13	13/14	14/15
Stags	11		4	6	5+1	4	11	7
Hinds	9		4	4	5	6	10	7
Calves	7		2	2	1	0	2	3
Total	27		10	12	12	10	23	17

*records mislaid.

A small number of roe deer are shot in some years, but populations are not high..

Assessments and Issues to be addressed in Future Management:

B9.24 Formal assessment of deer impacts within the ash woodland within the Rassal SSSI (effectively that area within the former NNR) were undertaken by SNH as part of routine Site Condition Monitoring in 2001 and 2003, with the site assessed as being in favourable condition; it is noted that most of the ashwood within the SSSI is now fenced and that the woodland has expanded (albeit slowly) as the result of (slow) natural regeneration and some planting. However, other features within the woodland were less favourably considered; in her survey of the woodlands in 2001, Averis noted that much of the floristic diversity of the ground flora was being lost within enclosed areas due to undergrazing (and development of a dense, lank sward of coarse grasses outcompeting many herbaceous species; Averis 2002 **Vegetation Survey and Assessment of Rassal SSSI and cSAC**), so there is clearly some tension here between the requirements for successful regeneration of woodland, and preservation of the rich ground flora and lichen communities.

B9.25 SNH have recently redesignated the woodland as wood-pasture (paragraph A3.14) and have agreed with the McCuishs a Grazing Management Plan to maintain the site's broad range of conservation interests through controlled cattle grazing. The perimeter of the woodland area has been re-fenced and the Grazing Plan recommends that the McCuish's small herd of 10 cross highland cows, should be grazed within the core woodland for two periods.

- i) 6 weeks from 15th May to the 30th June. [During this time it is expected that the cattle should graze the early growth of the coarse grass species; in particular the *Deschampsia cespitosa* which is likely to replace the bracken where it has been controlled.]
- ii) 6 weeks from the 15th August to the 31st October. [During this time the cattle should remove some of the rank summer growth and also return to the areas grazed in the earlier period to compound the grazing effect and control the dominant coarse grasses.]

[Boulton, A. February 2013: Rassal Ashwood National Nature Reserve: A Road Map to de-designation]

B9.26 This simple two period grazing system was designed to control some of the rank vegetation but allow for a grazing break for flowering plants to provide a nectar source for invertebrates and maintain the seed bank. Over the long term it is anticipated that the regime of grazing should develop grazing "greens" within the woodland of shorter, species- rich, grasslands.

B9.27 Within the wider area of the SSSI/SAC, routine Site Condition Monitoring carried by SNH in 2004 and 2007 suggested that a number of designated features within the site failed to reach criteria established for “Favourable Condition” – notably recording significant areas suffering from excessive impacts (grazing/trampling) from deer and/or livestock.

The results of the Site Condition Monitoring assessments carried out in 2004 and 2007 are summarised below.

Notified Features	Designation	Condition Assessment
Mountain Willow Scrub	SAC	Unfavourable – no change
Hard water spring depositing lime	SAC	Favourable – maintained
Plants in crevices in base-rich rock	SAC	Favourable – maintained
Alpine and subalpine calcareous grassland	SAC and SSSI	Unfavourable – no change
Limestone Pavement	SAC and SSSI	Unfavourable – no change
Upland Assemblages	SSSI	Unfavourable – no change
Subalpine calcareous grassland	SSSI	Unfavourable – no change

NB. The limestone pavement feature was assessed as being ‘favourable’ in 2004, but following changes in the assessment criteria, was found to be unfavourable in 2007.

B9.28 In response to this an independent assessment of herbivore impacts was carried out on three representative Natura habitats in August 2008 (Halcrow 2008). The survey report indicated that the browsing impacts varied across the site relating to the mixture of livestock and deer utilising the site and the sensitivity of the different habitats. Impacts were in places considered too high on the limestone pavement and alpine and subalpine calcareous grasslands, and the willow scrub was considered to be limited in distribution by grazing impacts.

B9.29 A Collaborative Upland Habitat Management Plan [CUHMP] was agreed between the owners of Lochcarron estate, the owner of Kinlochdamph and the McCuishes in March 2010 to address issues and concerns raised and deliver favourable condition within the site. In summary, the main provisions noted:

1. To the extent that some of the impacts recorded within the SAC may have been due to sheep, action has already been taken by reduction of grazing levels under a Rural Stewardship Scheme in 2004; it is intended that livestock grazing be maintained at these reduced stocking levels.
2. It was further suggested that in the longer term a redistribution of these sheep – and their impacts) over the ground might be effected by targeted bracken spraying on lower slopes, which will result in the medium- to longer-term in improved grazing opportunities on the lower slopes (resulting in reduced pressures on the more vulnerable habitats at higher elevation).
3. Management actions to reduce impacts of deer were targeted to include some reduction in stocking density overall, but in particular focused upon increased targeting of cull effort directly within the SAC (thus reducing local densities here through a combination of actual cull mortality and disturbance) and
4. through a series of measures designed to reduce the amount of time spent within the SAC area by remaining deer populations, by providing alternative shelter and foraging opportunities elsewhere. This was expected to result from
 - a) the removal of the boundary fences on Glen Mhor (allowing an unchanged population of deer access to an additional 1214 ha of improved habitat
 - b) proposals to remove fences and to open the 1994 enclosure at Coille Dubh on Kinlochdamph (paragraph B7.17)

B9.30 The most recent SCM for the site has just been completed (2015; paragraphs A5.10-A5.12). An advance draft summary of the surveyor's report has been forwarded by SNH. It notes (Wells, 2015): "Most of the issues affecting Rassal tend to involve sheep rather than deer, and even then, heavily grazed areas tend to be quite localised. Overall, it appeared deer numbers seemed to be relatively low over much of the site, apart from the eastern sector of the SSSI where there is notable localised trampling of more sensitive habitats, such as H21 oceanic heath and M10 flushes. However, grazing impacts recorded were generally low or moderate and the trampling tends to be localised. In common with most of the Highlands, deer numbers remain too high for montane willow to expand beyond inaccessible locations (the feature will 'fail' the assessment).

B9.31 Of the other features assessed during this cycle, calcareous grassland and limestone pavement will be classed as having failed the assessment. However, the former will be because of a variety of indicators relating to historically-prolonged grazing, mostly by sheep, and the latter because of a technical issue relating to inadequate indicator species options and also because many of the sample sites (derived from the 2008 HIA waypoints for this feature) were situated on 'marginal' pavement in the lower, western part of the SSSI (in many cases simply small rock outcrops rather than true pavement). Thus none of these latter 'failures' have any real implications in relation to future management of deer populations across the area. Colin Wells noted: " Most of what I would regard as 'genuine' pavement, on the higher central and eastern sectors of the site were in good condition ."

B9.32 Mainly because of the failure of these individual component habitats, Upland Assemblage will also have to be classed as having failed overall - although not by much. Of other components, it is mainly flushes and springs that show consistently high impacts - mainly from trampling. Heaths, calcarous rock and acid grasslands are mostly in good or reasonable condition across much of the SSSI."

B9.33 It is not clear what the implication of these results may be in terms of revised management although SNH advise that since the provisions/actions set out in the current CUHMP (paragraph B9.29) are not addressing all issues of concern there may be need for further discussions with all Estates concerned.

B9.34 Site Condition Monitoring of the **Allt na Carnan Gorge** in 2001 also assessed this site as unfavourable , although this was largely due to presence within the SSSI of non-native tree species. It is noted that the intensity of grazing/browsing appears to have decreased in recent years (to 2001) allowing some expansion of the woodland into adjacent open ground. Once again therefore, any concerns about the condition of this site do not put explicit pressure on deer management decisions.

Other Issues:

B9.35 Concern was expressed in the 2009 Group Deer Plan that failure to maintain, or active removal of fences enclosing the neighbouring property of Glen Mhor might have significant impact on deer distribution across the wider catchment if deer moved into this formerly-protected area in large numbers. In the event while Glen Mhor has built up a small resident population of hinds and holds significant numbers of stags in winter and early summer, many of these stags leave the Estate at the autumn break-out and the ability of neighbouring properties to achieve historic sporting culls has not been affected.

B9.36 It is clear however that deer populations (whether hinds and stags) are effectively continuous between Glen Mhor, Lochcarron, Kinlochdamph and Tullich. There is and, for many years has been, a coordination of count effort between the neighbouring estates in this sub area. There has recently also been discussion regarding cull figures.

B10 Glen Mhor Estate

Description:

B10.1 Glen Mhor Estate (1214 ha) lies towards the west of the Management Group area between Lochcarron to the north and the North Strome section of Lochcarron to the south. Under a previous ownership, the vast majority of the Estate, which lies astride the road from Lochcarron to Kishorn, was ring-fenced to exclude deer and extensively planted up to restore natural woodlands over much of the ground. A small section to the north east (where the Estate adjoins Lochcarron) remained unfenced - the fence for the woodland restoration projects having been set in somewhat from the actual march; on the eastern boundary the fencing links into the fences erected by Tullich Estate to enclose their Allt nan Carnan Woodland scheme. This ring-fence is now however breached in a number of places and deer do increasingly have access to the property - with the exception of woodland plantings or plantation forestry which is separately enclosed.

B10.2 Before enclosure in the 1990s, the Estate was largely open moorland, although there were some small remnant areas of natural woodland associated with the steeper burn-sides. After enclosure, much of the remainder of the ground was planted up with native woodland (birch and other native broadleaves, together with areas of Scots pine of local provenance), apart from some parks and in-bye land around the house. The new woodland is now well-established and after the protracted period of protection from grazing, the underlying heather is strong and luxuriant.

B10.3 With the exception of commercial plantations, planting of native woodland was not continuous and the Estate thus now presents steep hillsides with a good scattering of birch, pine and rowan in clumps over the lower slopes and in the gullies of the many burns which feed the Abhainn Cumhang a' Ghlinne (presumably in this case as an expansion of original remnant patches). At higher elevations, tree cover peters out offering a natural, feathered, upper line to the woodland cover. Amongst and between the trees, there is a vigorous growth of *Calluna* heath which extends also above the current treeline on the well-drained steep slopes which rise on either side of the glen; as noted, after a prolonged period of protection from grazing, heather growth is especially strong. On the tops (and especially towards the march with Lochcarron Estate), the ground flattens and tends more towards a wet heath vegetation.

B10.4 Glen Mhor owns a separate commercial plantation to the southwest above Achintraid. This young plantation is separately and securely deer fenced. There are also a number of grass parks around the house itself and along the road towards Kishorn (at the junction with Ardoch) although over the years these have become somewhat rushy.

Objectives:

B10.6 The original ring-fence for woodland creation has now been breached in a number of places and deer increasingly have access to the Estate, although numbers are not high. It is the owner's intention to develop Glen Mhor as a mixed sporting Estate with some stalking of both red deer and roe and a small pheasant shoot. Aspirations are to sustain a sporting quota of some 6-7 stags per year.

Deer Populations:

B10.7 As noted, red deer were largely excluded from Glen Mhor during a prolonged period during establishment of the new woodland plantings. The perimeter fence has however now been breached in a number of places towards the boundary with Lochcarron Estate. In addition, a group of 13 hinds were bought in from deer farm stock by the immediate previous owner Mr Ole Christopher Due and his partners: Nicolaj Due and Birger Brix. While these are predominantly hefted around the inbye parks around the house, numbers have increased and the deer draw out more extensively onto the lower slopes north and south of the road.

B10.8 Currently hinds are still strongly hefted around the improved parks and this lower basin within the glen, although it is to be anticipated they will draw further out in time. Numbers are assessed at between around 40 and 70. Glen Mhor now also supports a significant population of stags, with an estimated 15-20 resident or near-resident on the south side of the road and others, perhaps more transient, drawing down onto the slopes of Cearcall Dubh and Am Beannan (above Creag a' Chadha). These "northern" stags overwinter increasingly overwinter on Glen Mhor, but draw back up to the upper slopes over the summer and frequently leave the Estate during the rut - with comparatively few hinds available as yet within Glen Mhor.

B10.9 Numbers recorded in recent end-of winter counts carried out by Gillian Pattinson's team are summarised in the table below

	2008	2009	2010	2011	2012	2013	2014
Stags		69			50		37
Hinds		12			110		40
Calves		3			27		12
Total		84			187		89

Late summer (August) counts record

	2008	2009	2010	2011	2012	2013	2014	2015
Stags		48		52		156	79	84
Hinds		17		18		25	71	45
Calves		5		8		15	45	29
Total		70		78		196	195	158

Glen Mhor also has significant populations of roe deer.

Recent Past Management:

B10.10 Deer Management under the 2002 SW Ross Deer Plan was in effect targeted on shooting out any deer which may encroach into the woodland schemes; but culls were very low. Only 3 red deer and one roe deer were shot in the period 1997- 2002 in total. The Estate was subsequently purchased in 2007 by Mr Ole Christopher Due and his partners: Nicolaj Due and Birger Brix whose intention was gradually to increase the sporting activities regarding red deer and also roe deer on Glen Mhor. The current owner acquired the property in March 2012.

B10.11 Culls of red deer reported to the SW Ross Deer Management Group are summarised below:

	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15
Stags		7	6	?	?	1	8	5
Hinds		0	0	?	?	0	1	2
Calves		0	0	?	?	0	1	0
Total		7	6			1	9	7

In addition a small number of roe are also shot.

B10.12 At present no other management is carried out although it is proposed to put out mineral blocks to attract stags on either side of the hill track to the north of the property. It is also proposed that improved parks beside the house will be topped and cleared, to improve the quality of grazing for deer.

B11. Fionnaraich

Description:

B11.1 Fionnaraich Estate occupies an area of approximately 1080 hectares to the west of Coire Fionnaraich, formerly part of the Ben Damph Estate. It marches to the north with Ben Damph, to the south with New Kelso, and to the west with Kinlochdamph and Tullich. The entire eastern boundary along Coire Fionnaraich itself borders with North Achnashellach.

B11.2 For a relatively small area it offers quite a diversity of ground. The head of Coire Fionnaraich, above the Loch, opens into a series of shallow coires providing good grazing. The slopes of the main corrie itself (east-facing slopes of Maol Chean-dearg, Meall na Ceapairean, Carn Mor and Creagan Fhir-eoin) tend to be quite steep and on the lower slopes are essentially covered with wet heath/ grassland vegetation (predominantly *Erica tetralix*/*Molinia caerulea*), but the exposed faces of the higher bluffs and screes offer some good *Agrostis*/*Festuca* 'greens'.

B11.3 Much of the ground, particularly around Carn Mor and Clach nan Con-fionn is extremely stony, but to the south of Meall nan Ceapairean, there is a large flat-topped area around the Loch Moin a Chriathair towards Meall an Daimh, which offers a good depth of peat, is poorly drained and supports a blanket mire ecology.

B11.4 Vegetation, as described is fairly typical for the area, with blanket bog developing on the flatter, poorly-drained tops, alpine/subalpine flora developing on the stonier ground (characterised by an abundance of *Lycopodium* clubmosses and other prostrate species) and with *Molinia*/heather mixtures covering most of the lower slopes. At the very south of the Estate, where it borders with New Kelso, there is an extensive stretch of native broad-leaved woodland (c 4.42 ha) associated with the two 'arms' of the Allt Rugh Sleigheich and its confluence with the burn from Loch Moin a' Chriathair. The banks of both streams are steep and relatively inaccessible at this point; the woodland in the gullies (and in the small central 'island' at the confluence is well-established and shows good regeneration.

Deer populations:

B11.5 Given the size of the property and the nature of the ground, there is a significant proportion of deer on Fionnaraich which are "shared" with and these neighbouring properties of Tullich, New Kelso, Ben Damph and Achnashellach (and to a lesser extent with Kinlochdamph) in the sense that home ranges overlap Estate boundaries and the deer move freely between adjoining properties.

B11.6 Counts on Fionnaraich are not coordinated with counts on adjacent ground and when undertaking counts the owners try to make an estimate (from the behaviour of animals when disturbed) of the number which might reasonably be considered more or less resident on Fionnaraich itself. Figures to 2006 suggest an average presence of perhaps 35 hinds within the Estate since 2002 and 10-12 stags. There are also small numbers of roe deer, and there was a small population of feral goats, although none have been seen in recent years.

B11.7 Traditionally, Fionnaraich has been considered to be a hind forest and the majority of stags in season come in from Coulin, over the pass at the far northwest corner of the Estate (Bealach Ban) as well as from Ben Damph and Achnashellach. The best holding ground is to the southeast, where the ground marches with (Lochcarron) Tullich and New Kelso; certainly most of the hinds seem concentrated in this corner (and may well be shared with New Kelso); this will itself act as a focus for stags in season, from within Fionnaraich itself, or coming onto the ground from Achnashellach to the east, or New Kelso to the south.

Recent Past Management:

B11.8 Stalking is carried out by the owner-partners and their families. In general up to a maximum of 4 or 5 stags have been taken each year since 2002, with small numbers of hinds. Stalking of both stags and hinds is generally restricted to only a few (holiday) weeks in the year.

Cull figures are summarised below:

	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15
Stags		3	5	2	2	4	4	5
Hinds		2	0	0	2	4	0	3
Calves		0	0	0	1	5	0	0
Total		5	5	2	5	13	4	8

In addition a small number of roe are also shot.

Assessments and factors likely to influence future management

B11.9 Within the 2002 Plan it was suggested that, on the basis of a calf production of around 7 and 8 per year recorded at that time, it might be appropriate to attempt a maintenance cull of between 3 and 4 hinds each year. Clearly culls over the past few years have generally been below levels recommended for maintenance (with no hinds at all being taken in a number of years). Without any recent count data available it is however hard to say whether or not numbers have been increasing, or what would be an appropriate hind cull for the future and, as a relatively small land area, Fionnaraich is inevitably strongly influenced by movements to and from neighbours.

B11.10 It is probable that winter use of the ground from hinds may have increased since exclosure of the sheep parks at Tullich from their traditional range. Grazing impacts were assessed in 2002, and during re-assessment in 2007, as generally moderate, but already in places moderate-heavy (particularly on the slopes below Maol Chean-dearg and in the wetter plateau of Moin a Chriathair). The estate might feel it appropriate therefore to take a slightly increased cull of hinds (up to the levels recommended in the 2002 Plan of a minimum of 3-4 hinds per year, to ensure against any further increase in hind numbers or impacts.

B11.11 Allowing for a considerable dependence on more traditional stag forests (New Kelso, Coulin, North Achnashellach), Fionnaraich might expect to maintain its current quota of up to 4 or 5 stags. However, given concerns about recent declines of stag populations in the immediate local area harvest will be limited to this with a maximum of up to 7 taken only in years where significant number are seen on the ground.

B12 New Kelso

Description:

B12.1 New Kelso lies to the south of Fionnaraich, with the march along the line of the Allt Rugh Sleigheich. Most of the open hill land lies to the north of the A890 Achnasheen road but New Kelso also includes the low-lying land to the south of the road, between the road and the River Carron; the Carron acts as the boundary with Attadale Estate to the south.

B12.2 This low-lying ground between road and river contains a number of coniferous plantings and also offers grazing on the improved sheep-parks of the river flats and also on the foreshore to the head of Loch Carron. Except for fringing areas around improved grasslands, the bulk of the forestry to the south of the road is owned by others [Lady Catherine Wood] although New Kelso leases the stalking. These blocks are well fenced with a small number of deer managed by Guy Grant and Shaun Macdonald; those areas belonging to New Kelso are now mature and are open to the deer for cover.

B12.3 North of the road, the New Kelso ground marches to the west with Tullich and to the east with Achnashellach. Much of this eastern boundary is fenced (down the eastern side of a recently established native woodland initiative of 40 hectares, which links directly to the fenceline of a more established coniferous plantation); movement of animals to and from North Achnashellach is still possible however past the northern end of the new enclosure, through Fionnaraich. Both of these woodland areas are owned directly by New Kelso, but there is also an extensive coniferous plantation along the roadside owned by Lady Wood and managed by Fountain Forestry. The open hill ground is generally lower and less stony than that of Fionnaraich, with the lower ground once again a mixed grass heath and with good grazing on the higher screes.

B12.4 The Estate itself runs some 600 breeding ewes (with numbers, including hoggs and current year's lambs rising to around 900 at peak times of year). This sheep stock is managed as part and parcel with the Macdonald's other farming interests at Cononbrae and stock are regularly moved between the two holdings. When on New Kelso they are for the most part maintained wholly within the fenced sheep parks north and south of the road, associated with the low ground. A proportion of these animals are grazed out on the hill, but generally only for a limited periods (for 2-3 weeks at the end of August and at the end of February). The year's gimmers are introduced to New Kelso late in the season, just before the lamb crop is taken off to avoid over grazing. The Estate now also runs 18 cows and their calves which may also be turned to the open hill in the summer months to improve the hill grazings. There are two crofts on New Kelso (including one absentee) but once again, all stock is restricted within fenced ground; none range on the open hill.

Deer Populations:

B12.5 Hinds are concentrated primarily to the north of the road and fairly widely scattered across the hill ground, although with particular concentrations towards the western side of the property on the west-facing slopes of Torr na h'Iolaire above the Abhainn Bhuachaig on the march with Tullich. Hinds also favour the heathery ground to the west of Loch a'Mhuillin on Fionnaraich, on the march with Kinlochdamph.

B12.6 Hind populations here are not especially well-hefted and there is some regular movement across the marches depending on wind and weather, exchanging with Fionnaraich and Tullich, and to a lesser extent with North Achnashellach. Movements onto Tullich may have been reduced since the low ground parks on that latter property were deer-fenced thus forming a partial barrier, but any exchange is restricted in any case to the low ground; hinds from New Kelso do not draw up onto the higher ground of Tullich (where a separate heft shows regular exchange with Kinlochdamph).

B12.7 While there is one parcel of mature stags which is hefted north of the road, the majority winter south of the road, using the cover of the mature woodlands and grazing on the sheep parks and the Loch shore. Significant numbers of stag winter on the croft lands between the river and the railway line, drawing out to higher ground on both sides of the Estate over the summer.

B12.8 The extent to which deer populations north and south of the road are distinct is unclear. Certainly there is some cross-over of stags during the rut, and some stags from the north side of the property may well cross the road to seek the shelter of the forestry blocks in the south fringing the inbye parks, but beyond that the degree of movement and exchange is uncertain. It is possible that the two populations may be more or less distinct, with stags (and hinds) on the south side linking more with populations of Arineckaig and South Achnashellach (in the Lochalsh Deer Group), while those on the north side of the road may link more with populations on Fionnaraich, North Achnashellach and Tullich. Thus, while drawing down onto low ground of New Kelso over winter, and possibly, as above, even crossing the A890 for access to shelter within the woodlands south of the road, stags from the north side may draw back up again to the north in the spring and

summer, with little mixing of stocks north and south of the road. Future monitoring is proposed by the Estate to resolve this issue.

B12.9 Counts are undertaken opportunistically. Counts in April 2012 (restricted to the hill ground north of the road) returned figures of 20 stags, 85 hinds and 19 calves, while a count in August 2014 showed 65 stags, 120 hinds and 48 calves. Two counts in 2015 returned estimate of 46 stags, 86 hinds and 17 calves; 43 stags, 112 hinds and 7 calves, respectively.

Recent Management

B12.10 Stalking is carried out by the owner, assisted by a part-time stalker. All management is carried out north of the road. Culls on the open hill from 2007 are reported below [**with woodland culls in the separately fenced block leased from Lady Wood indicated in brackets**]

	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15
Stags	10	8 [0]	15 [3]	7 [2]	6 [1]	8 [2]	10 [1]	12
Hinds	20	13 [4]	15 [3]	16 [5]	12 [4]	15 [3]	15 [2]	20 [6]
Calves	4	4 [0]	4 [1]	2 [5]	3 [1]	3 [1]	3 [1]	6 [2]
Total	34	25 [4]	34 [7]	25 [9]	21 [6]	26 [6]	28 [4]	38 [8]

Average culls over the period would thus be between 11 and 12 stags (although numbers taken vary considerably between years) and an average of 18.1 hinds [15.1 from the open hill].

B12.11 No winter feeding is specifically provided for the deer but hay and feedblocks are put out for livestock over winter to which deer have free access. Ongoing pasture management also undoubtedly benefits deer; there has in recent years been an extensive programme of topping of rushes on the south side of the property, on both sides of the road.

Assessments and issues for consideration:

B12.12 Management has continued on New Kelso with little change and there seems little need to recommend future change. The stag cull is quite high for an area this size, but 36 years' of summer counts suggest this is sustainable.

B12.13 As noted there is some exchange of animals with Tullich to the west and some part of the hind population may be considered shared, moving freely to and fro across the march. Deer fencing of the sheep parks on Tullich may be expected to result in increased usage of New Kelso (and Fionnaraich to the north) by this group of hinds, with a shift in centre of gravity of home range of these animals.

B12.14 As also noted, it is somewhat unclear the extent to which populations to the north and south of the A890 may be considered distinct (paragraph B12.8) with stags (and hinds) on the south side linking more with populations of Arineckaig and South Achnashellach (in the Lochalsh Deer Group), while those on the north side of the road may link more with populations on Fionnaraich, North Achnashellach and Tullich. Future monitoring is proposed by the Estate to resolve this issue.

B13 Achnashellach [North]

Description:

B13.1 Achnashellach Estate (approximately 14,800 acres; 6000ha) consists of two main sections to the north and south of the A890 road between Lochcarron and Achnashellach. The Estate marches to the south east with Glencarron, to the north and west with Coulin and Fionnaraich/New Kelso. Both to north and south of the A890, the Estate in effect surrounds a core area of ground owned and managed by Forest Enterprise; this land area is largely fenced (paragraph B15.2) and represents an independent island of FE ownership within the Achnashellach property.

B13.2 Achnashellach belongs within two separate Deer Management Group Areas and only that ground north of the road falls within the South West Ross Group area. However, there is reported to be relatively little movement between the two parts of the Estate which can thus be considered for our purposes relatively self-contained and independent entities.

B13.3 That section of the Estate within the South West Ross Deer Management Group Area (**planar area assessed by SNH as 3200 ha**) is divided by the FE woodlands into two major sections: a small but significant area to the east where it adjoins Coulin in the area of the Red Corrie (Coire Ruadh), and a larger area to the west bounded by the watersheds of Coire Fionnaraich and Coire Lair. This western end includes the higher ground of Sgorr Ruadh, Creag Mainrichean and Fuar Tholl, Sgurr a' Mhuilinn and Carn Eididh.

B13.4 The southern section of this western end, around Coulags and Balnacra offers common grazings to 5 crofters (+1 absentee); current stocking rates are in the region of 300 ewes turned out on the hill through the summer (considered a substantial increase in more recent years due to a change of crofting tenant). The sheep are more closely focused on in-bye ground and by the roadside over the winter months when being fed; even during the summer however they are generally relatively well contained and do not wander far beyond the agreed outrun (defined by an old steel stock fence running eastwards to Carn Eilidh from the boundary between Fionnaraich and New Kelso Estates in Coire Fionnaraich, and rejoining the road around Loch Dughail). Croft land in this area also extends in a small section south of the road to include the flats between the road and the river at the south end of Loch Dughail.

B13.5 The vegetation of this northern section is unremarkable, and typical of much of the rest of the Management Area on Torridonian beds, with *Eriophorum/Scirpus* blanket mires and wet and dry *Molinia* heaths, characterised by varying dominance of *Calluna vulgaris* and *Erica tetralix*. As elsewhere, the thinner soils of higher ground become stony and support a more alpine/subalpine flora, but notably good growth of *Lycopodium* clubmosses and stags' horn lichen. The best grazings are offered in Coire Lair and the south facing slopes of Beinn Liath Mhor, the eastern side of Coire Fionnaraich. There are also good greens at the head of Loch Coire Lair and around the south face of Sgorr Ruadh. This western area of the north beat is largely hind ground, with two main hefts defined (and relatively independent of each other) in Coire Lair and Coire Fionnaraich.

B13.6 The eastern section around the deep ravines of Coire Ruadh is primarily stag ground and there is considerable movement of stags from this 'refuge area' between Achnashellach, Coulin and in the past with Forest Enterprise lands. More recently, the northern boundary of Forestry holdings in this area was refenced and must be presumed now to be secure; the western section of this fence technically lies on North Achnashellach Estate in order that it could be positioned to the north of the railway line and was erected by FE in conjunction with the owners of North Achnashellach Estate and Coulin Estate in partnership.

Objectives:

B13.7 Achnashellach is run primarily as a sporting Estate with an aspiration to maintain a quota of between 5 and 10 stags per year from the North (SWRDMG) sector.

Deer populations:

B13.8 As might be expected given that the beat effectively divides into two parts east and west of the FE ground, there are two main hefts of hinds and followers on this northern beat, one tending to move (north and south) along the faces of Coire Fionnaraich; the other group of hinds is based around Coire Lair and the slopes below Beinn Liath Mhor - where Achnashellach borders with Coulin.

Mature stags tend primarily to be found to the eastern section of this North beat around Coire Ruadh, with up to 100 animals sheltering here depending on the wind direction. As noted, there is continual movement to and fro across the marches with Coulin in this particular corner.

B13.9 Spring counts of deer are carried out on the Estate as often as practicable. Count figures to 2008 are summarised in the South West Ross Deer Management Group Plan of 2009; more recent counts by the Estate in the North beat (that area falling within the South West Ross Management Group), are updated below:

	2008	2009	2010	2011	2012	2013	2014
Stags	36	45	27	23	33	60	58
Hinds	158	155	142	135	136	126	119
Calves	26	38	30	23	38	44	30
Total	220	238	199	181	207	230	207

B13.10 Some summer counts are also undertaken on occasion and suggest a modest increase in hind populations over the summer months. Numbers overall however have shown little change over that past 20 years and densities in this North beat are stable at a level of approximately 11.0 deer per 100 hectares. Recruitment rates are comparatively low at a calculated 25 calves per 100 hinds on average [2010 to present]

B13.11 Both North and South beats of Achnashellach offer primarily hind ground. In the north, wintering stags are largely restricted to the area around Coire Ruadh, and these, rather than remaining on Achnashellach throughout the season, actually break out for the rut onto neighbouring Coulin. However, between 20-25 wintering stags now permanent above new fence at Balnacra and stag numbers in North beat slowly increasing. Achnashellach is however not dependent on home-grown stags for its stalking and late spring counts do not accurately represent the number of animals actually available for stalking on the Estate.

Recent Past Management:

B13.12 Detailed cull figures are available for the number of animals culled in each year from 1989/90. For the Estate as a whole between 24 and 25 stags per year were taken over the period (2008-2014); of these between 5 and 9 (average 6) were taken from the North beat.

Cull figures subsequent to preparation of the 2009 Group Plan are summarised:

	08/09	09/10	10/11	11/12	12/13	13/14	14/15
Stags	5	5	6	7	9	9	8
Hinds	20	15	4	8	16	11	11
Calves	9	9	5	8	8	5	7
Total	34	29	15	23	33	25	26

B13.13 It is apparent that culls of stags have varied a little from year to year (depending on what animals were seen on the ground) but have averaged at around 7 over the period (increasing a little in more recent years).

B13.14 Cull rates for hinds on the North beat have continued to be responsive to numbers and condition of animals seen on the ground with the aim of maintaining steady populations at a level of around 140 [as in average populations from 2010-2014].

B13.15 There is some (limited) supplementary feeding of stags in the Coire a' Chonais area of the South beat, simply in some attempt to hold some stags on the ground in this predominantly hind forest. No feeding is carried out in that part of the Estate included within the South West Ross Management Area. Little or no direct vegetational management is carried out in the sense of burning or liming.

Assessments and Issues to be addressed in Future Management:

B13.16 It is noted that both North and South beats of Achnashellach offer primarily hind ground; the Estate is thus not dependent on home-grown stags for its stalking in either beat. Stag populations in this north part of Achnashellach are shared to a degree with Ben Damph, Fionnaraich and New Kelso but more significantly with Coulin and Ledgowan. It has been noted more generally that there has been a significant decline in the total stag population within this catchment over recent years which must pose concerns about sustainability of recent harvest rates in the area as a whole.

B13.17 There was in the past additional concern about the possible impacts of culling carried out within the Forestry Commission grounds at Achnashellach on sporting populations in the wider area. However, reinstatement of a perimeter fence along the northern part of the FCS holding has significantly reduced any likelihood of animals from North Achnashellach (or further afield) being caught up in routine culls in FCS ground and FCS believe that few if any animals culled are drawn from this wider open hill population.

B14 Ledgowan [North]

Description:

B14.1 Ledgowan Estate (10,550 acres; 4,268 ha) forms the eastern boundary of the South West Ross Management Group area at Achnasheen. Like Achnashellach it has two main sections, which fall administratively into two different Deer Management Groups (South West Ross and South Ross). Ledgowan is split approximately two-thirds/one-third, north and south of the A890; only that part of Ledgowan to the north of the A890 (7050 acres; 2853 ha) is included within the SW Ross Management Group area. This northern area marches with Coulin to the west; its northern boundary is formed by Loch a' Chroisg and the A832 and the southern boundary by the A890.

B14.2 To the east, the ground slopes north and south about the central ridge of An Liathanach and ends in a series of classic terraces towards Achnasheen. To the west, Ledgowan includes the slopes of Carn Beag and extends also to the north facing slopes of Beinn na Feusaige. The southerly slopes of Carn Beag level out into a low, broad plateau above the road (Mile Dubh); to the north in this part of the Estate, there are a number of steep corries running down to the headwaters of Loch a' Chroisg.

B14.3 There is an area of mature coniferous plantation opposite Inver (grid reference NH145562). Fences on the north and west sides are maintained (as part of the boundary fencing of a newer woodland scheme immediately to the east, but fencelines to the east and south are no longer maintained so that deer may move in and out of the available cover. A more recent regeneration/restocking block on the western side of this older woodland is also now open to deer. There is also a further small plantation to the west (NH132550).

B14.4 There are otherwise occasional scattered patches of trees associated with steep burns of Coire Mhic Fhearchair, and on the slopes above Loch a'Chroisg. Here there are fragments of broadleaved woodland (mostly birch) in the gullies of the Deep Burn (NH100572) and to the west (Allt a Phiobaire), but there are larger areas of more extensive birch woodland at the eastern end of the Loch, still primarily associated with river gullies but also across the actual hill face (Liathanach). While these areas are extensive, cover is thin and there is no evidence of regeneration.

B14.5 Outside these woodland fragments, this north face is fairly typical grass heath as described elsewhere, in varying proportion along its length (with the highest proportion of heather at the western end of the Estate. Both north and south faces of Carn Beag offer a good mix of grass and heather showing moderate grazing impact (with heather in good condition and with abundant inclusion of *Vaccinium* within the sward). This grass/heather matrix is interspersed with numerous flushes, and patches of short-grass greens (*Agrostis/Festuca* greens). Overall this is productive ground. Carn Beag itself is relatively flat-topped, with some areas slightly wet and peaty (supporting typical *Scirpus/Eriophorum* mires), but overall it is stony and well-drained with a subalpine/montane flora and abundant lichens; the flat tops to the east above An Liathanach are more peaty. The flat plateau of Mile Dubh and the lower slopes north of the A890, further to the east of the Estate appear more acid and have clearly suffered a history of heavier (sheep) grazing; the heather is less abundant in the sward which is more dominated by coarse grasses.

B14.6 Up until 1991 the Estate supported 1100 ewes and followers (and thus at time was grazing up to 200-2500 head). In later years stocking rates were reduced and since purchase of the Estate by Mr Andrew Simpson in 2009 the Estate has held around 500 ewes and 50 cattle. Stock are held only on the north side of the property and in the main, the sheep are restricted to the south of this area (thus the south facing slopes above the A890) and are concentrated more towards the east, around the fanks.

B14.7 The Estate has invested substantially in infrastructure, since changing ownership and a new hill track has been created from the farm buildings at Ledgowan itself up onto the spine of An Laithanach and through to Coire a' Phioch towards the Coulin march. A spur leads to the edge of Lochan Sgeireach and there is also a branching track running from the ridge of An Laithanach around the eastern flank of Carn Beag and down towards the fank at Luib. A similar track runs up the hill on the southern side of the road, servicing a hydro-electric scheme installed on the Allt Gharagain.

Deer Populations:

B14.8 While there is some exchange of animals across the A890 with the southern part of the Estate, movements to the north and east are restricted by Loch a' Chroisg and the fact that during the recent upgrade of the trunk road, much of the roadside has been securely deer-fenced. North Ledgowan's deer populations are thus primarily connected with that of Coulin to the west.

B14.9 Due to lack of resources the Estate has not in the past undertaken regular counts. A count in late winter 2008 undertaken in collaboration with Achnashellach and Coulin suggested a population on North Ledgowan at that time of 156 stags, 254 hinds and 97 calves.

More recently a count of 9th February 2015 returned an estimate of 28 stags, 165 hinds and 56 calves, while a subsequent count on 10th June 2015 returned figures as 38 stags, 157 hinds and 37 calves.

B14.10 Ledgowan is clearly not simply a hind forest, but retains significant populations of stags throughout the summer. The Estate winters relatively few stags and that these move onto Ledgowan in the late spring during a general break-out from wintering grounds. Males are concentrated in two main areas: at Mile Dubh and on the slopes between Coire a' Ghormachain and the Forestry blocks; and to the east of the Estate on the terraces above Achnasheen. That said however, small pockets of stags may be found widely within the beat above Loch Crann, to the west against Druim na Criche on the march with Coulin and to the south around the west of Beinn na Feusaige. There is some further immigration of stags in season at this western end of the beat, from Coulin, but Ledgowan is generally considered self-supporting for stags.

B14.11 Hinds are concentrated to the north of the Estate, on the slopes above Loch a Chroisg, and in the Corries of the Deep Burn and the Coire a'Phiobhaire. There are excellent grazings along this face and on the flats below the Deep Burn at the edge of Loch Crann. In more recent time hinds have begun to become established also on the south facing slopes above the A890.

Objectives and Recent Past Management:

B14.12 Ledgowan is managed as a mixed objective enterprise with both farming and sporting interests. Some 40 stags and 40 hinds are taken each year from the combined Estate, with up to 25 stags a year culled on the North side of the road in the past. There is no winter feeding provided specifically for the deer although of course deer have access to feed provided for the Estate's sheep and cattle. In the past vegetation management has been limited although some burning is proposed by current management.

B14.13 Culls from 2002 –2008 are reported in the previous Plan. Since the current owner acquired the property in November 2010 culls are reported for the North side, as

	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15
Stags		22	23	28	25	27	25	25
Hinds		23	25	20	25	20	25	20
Calves		4	0	0	0	2	0	10
Total		49	48	48	50	49	50	55

Assessments and issues for consideration:

B14.14 Overall, 2008 counts translate to an effective density of approximately 17.5 deer per 100 hectares, consistent with generally moderate or moderate/heavy impact recorded in field surveys in 2002. It is noted that this population of deer is carried alongside significant numbers of sheep.

B14.15 While Ledgowan carries significant resident populations of stags and hinds year-round, it is acknowledged that the estate also benefits in late season from an influx of in season from Coulin and that the two Estates do effectively share a common biological population. Both Estates have reported declines in numbers of stags in this part of the Management Area over recent years and it is prudent to assess current combined harvests against what may be sustainable in the wider area.

2008 counts suggest a total population between Coulin and North Ledgowan together of 333 stags; 612 hinds and perhaps 213 calves.

B14.16 Hind populations at that time were clearly well in excess of what might be required for recruitment, while current stag populations might be considered sufficient to sustain an annual harvest of the order of 45-50. Actual combined harvests over recent years have averaged of the order of 55 [32 on Coulin and a further 23 or so on Ledgowan] so that margins must be considered tight.

B14.17 It is accepted however that such considerations are based on but a single count (in 2008) and regular coordinated counting over a period will help to resolve more clearly whether current harvest rates remain sustainable.

B14.18 Given uncertainties about actual numbers of deer resident on Ledgowan year-round and the increase in numbers in the summer, it would seem essential to institute some regular regime of annual counts both at the end of winter/early spring and in early summer. Such routine counting is now in any case a requirement under the new management Benchmark scheme. More accurate figures would help resolve some dubiety about the sustainability of current harvests and assure that harvest rates for stags are truly sustainable in the longer term.

B14.19 From past count data it would also appear (paragraph B14.16) that there may have been in the past (and possibly still remain) more hinds on the ground than required for recruitment (to replace those harvested at maturity). In this case it might be prudent to increase the hind cull in order to effect a reduction in hind numbers overall. However, it is clear that lack of any accurate count data renders any further consideration purely speculative, and it is appropriate at this point merely to raise the issue for future consideration when more accurate count data are collated.

B14.20 Assessments of vegetational impacts in 2002 suggested with generally moderate or moderate/heavy grazing impacts overall. The 2002 Plan noted :

“Cam Beag offered a good grass/heather sward in good condition. It appeared to sustain moderate levels of grazing in that individual heather clumps were 'hedged' with flat tops, but the heather was otherwise in good condition and there was abundant inclusion of *Vaccinium* within the sward. Heather growth in the gullies of the Deep Burn, Coire a' Phìobhaire and other stream beds of the north facing slopes above the western end of Loch a' Chroisg was thick and dense; this together with the widespread persistence of fragments of birch woodland, even in the absence of significant recent regeneration, suggests a moderate rather than heavy grazing impact.”

B14.19 Reviewing some of these same areas in October 2014 independent assessment suggests that most of the vegetation accessed by the new hill track was showing only light-moderate impacts in areas where only deer (and few sheep) were grazing, with moderate or moderate-heavy impacts again recorded in areas more utilised by sheep.

B14.15 Under the new Benchmark, Estates will be expected to undertake their own regular assessment of grazing impacts on the vegetation. Such assessments offer valuable additional information about the sustainability of grazing stock density and the essential balance between stock numbers and the capacity of the vegetation to support them in the longer term.

B15 Forestry Commission Scotland

B15.1 Forestry Commission Scotland formerly owned a number of woodland blocks within the South West Ross Management area, but many of these have been sold in recent years [paragraphs A4.3 and below: B16.5- B16.17]. Within the Management Area FCS now retains only the forest block at North Achnashellach. This is separated by the A890 from a further FE holding (South Achnashellach) within the adjacent Lochalsh DMG area. Unlike the block at South Achnashellach, south of the A890, North Achnashellach is primarily a commercial forest managed by clearfell and restock (c 500 ha), although there is a small section of around 24 ha of native woodland to the east.

B15.2 The Forest Enterprise ground of North Achnashellach marches with the north part of the privately owned Achnashellach Estate at its western end and with Coulin to the east. These Estates both lie to the north of the FE ground [Coulin to both north and east].

There is a perimeter fence on this northern march separating the Forestry ground by a deer fence from these two sporting Estates which was renewed during the period of the last Deer Plan (2009-2014); the western section of this fence technically lies on North Achnashellach Estate in order that it could be positioned to the north of the railway line and was erected by North Achnashellach Estate in conjunction with FCS and Coulin Estate in partnership. There is no perimeter fence along the roadside, but the western end is secured by cattle grids associated with the railway crossing.

B15.3 It is FCS policy to manage deer throughout the woodland rotation and maintain numbers of deer at levels commensurate with acceptable impacts. Formal counts are not undertaken and although population dung counts are made on a regular basis these are undertaken across a larger area (North and South Achnashellach combined so that data are not accurate for North Achnashellach alone). Forest Commission Scotland policy is in general to maintain minimum damage to forest crops.

Management is thus responsive to ongoing monitoring of impacts, with surveys carried out on a regular basis, particularly within restock sites and management targets established to ensure fewer than 10% of leader shoots show browsing damage after 1 year. Culls are thus opportunistic and rather variable.

B15.4 Stalking is carried out on behalf of FCS by a part-time stalker (who shares his time between FE properties and managing deer for SNH on Beinn Eighe). North and South blocks are considered a single Management Unit and records below thus are for the overall combined area; culls on North Achnashellach have in the past been considered to be approximately 50% of totals shown.

	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15
Stags	41	53	61	64	24	20	30	31
Hinds	22	30	35	44	9	21	14	10
Calves	8	15	14	36	4	12	3	4
Total	71	98	110	144	37	53	47	45

Sika deer are also shot.

B15.5 These culls however do not impact upon the wider open hill population of South West Ross. Now that the perimeter fence against North Achnashellach Estate and Coulin is secure, FC populations should be effectively closed to the open hill ground of the wider SW Ross Management Area. It is indeed clear from these figures that cull levels have dropped significantly following completion of that perimeter fence and the bulk are now probably taken from the FCS holding south of the road. Where culls are taken in the north, these too may predominantly be animals moving into the north block from South Achnashellach, since the road remains unfenced.

B16 Other affiliated areas

North Applecross Crofters

B16.1 While formally, the land ownership is that of Applecross and the Applecross Trust, the erection in 1999 of a major deer fence from Lonbain in the west to Loch Lundie and Inverbain in the east, effectively isolates 6630 ha of the north of the property from the southern parts of the Estate. In this area there has been close collaboration with and support of local townships to develop woodland on parts of former Common Grazings. As noted elsewhere within this Plan, native woodland schemes have been established in collaboration with the North Applecross crofters at Sallachar, Lonbain, Kalnakill, Fearnmore, Fearnbeg and Cuaig, Kenmore, Inverbain and Ardheslaig.

B16.2 The Estate liases closely with the crofting townships and undertakes any necessary deer management where incursions may occur into vulnerable plantations, such there is close collaboration here with the crofting communities.

B16.3 Similar schemes are now being developed in collaboration with crofting townships to the south of Applecross.

Ardoch:

B16.4 An area of 50 ha of managed commercial forestry has also been purchased by Mr Kurt Larson at Achintraid. This block lies between Glen Mhor and Kishorn/Achintraid. Management within the area continues to be primarily directed towards commercial forestry although Mr Larson has a keen interest in deer and has subsequently joined the South West Ross DMG.

Deer control has recently been assessed by Forestry Commission and was considered acceptable with fences in good condition and no signs of damage.

Reraig Forest

B16.5 An area of 655 ha of former commercial woodland [235 ha] and associated open ground [420 ha] at North Strome was sold by the Forestry Commission to Mr Charles Anderson in June 2013. The ground is managed for Mr Anderson by Colin Murdoch.

B16.6 The commercial woodland extends to some 235 ha and there is an associated area of 420 ha of open ground. This is largely heathland, although there are some small areas of native woodland; the bulk of this lies below the cliffs at Reraig, being predominantly birch, with a sprinkle of rowan and ash. The other notable area is to the east of Leacanashie; south facing, this has a lot of oak, with birch, hazel and ash.

B16.7 It became apparent very quickly after taking over the ground that there were virtually no resident red deer, although it is understood that in the past it was always considered stag ground. Perimeter fencing remains porous and under the new ownership animals have started to reappear, many perhaps emerging from the woodland cover since some were clearly quite old. As many as 30 stags may have overwintered on the property through the 2013/14 winter. The bulk of the stags appear to leave us in September, going off to the hill for hinds, returning after the rut.

B16.8 Partially in response to the scarcity of wild deer, a deer proof enclosure has been erected within the boundaries of the holding; 8 stags were introduced to this from a source on the East coast in September 2014 with 12 hinds added in November 2014. To date no animals have been shot within this enclosure, but it is intended to operate it as a put-and-take enterprise.

B16.9 The erection of the new enclosure within Reraig, would appear to have had a significant impact on the dynamics of the wild deer population in the area, creating two almost distinct groups with little movement between them, with one group hefted within the Achintraid peninsula, the other from Reraig Glen across to Leacanashie and Ardaneaskan. There would appear to be about 6-8 hinds on the Reraig side, with upwards of about 20 stags. On the Achintraid side there are estimated to be no more than 6 hinds and upwards of maybe 10 stags. Since building the fence there has been a great increase in natural regeneration in Reraig Glen clearfell area and indeed within the enclosure itself, mostly birch with some alder.

B16.10 Although no animals have as yet been shot within the new enclosure, as numbers of wild deer have increased, however, a small number have been shot from the hill ground with 4 stags taken in 2013 and 5 stags in 2014. It is likely that harvests of this level will continue in future years. The external fence to the hill is now fairly deerproof on the Achintraid side but the Reraig side remain porous with considerable exchange across the marches. Even on the Achintraid side however, fences end at the shore and there may be considerable exchange where animals may swim around fence-ends or directly across Loch Kishorn to/from Applecross.

B16.11 The Group is aware of concerns of some of its members about the risk of escapes of introduced stock (and bloodlines) through porous fences, but recognises that currently any introduced stock are contained within a new and deer-proof enclosure and do not have access to the open hill. The Group is also aware that 'exotic' stock has already been introduced and released to the area on Glen Mhor when it was under the ownership of Mr Ole Christopher Due and his partners: Nicolai Due and Birger Brix. The Group in contact with Mr Anderson through his manager Colin Murdoch who regularly attends the SWRoss Deer Group meetings.

Carronach:

B16.12 An area of 109ha of commercial coniferous forestry has similarly been sold to Mr Jim Gatwood. It is understood that fences are to be retained and that the main objective is to continue to manage the area for forestry purposes.

Kirkton Woods:

B16.13 Sale has also been completed of the 86 ha forest block of Kirkton in Lochcarron to the Kirkton Woodland Heritage Group, a local community Group. This woodland area and its management have strategic importance within this sector of the South West Ross Group Management Area.

B16.14 This former commercial woodland is largely of Lodgepole Pine and Sitka Spruce with smaller pockets of Scots Pine. The woodland is now largely mature and certainly beyond a stage where it is vulnerable to deer browsing. Fences are porous and have been undermined in places; clear trackways through the fences are apparent on both its southwestern and northern sides, with deer clearly using the woodland as cover/harbourage and moving out onto Lochcarron Estate to the west and to Tullich to the north. Plans for future management of the area thus may have considerable implications for deer populations in this particular corner of the Management Area.

B16.15 The Group is currently in discussions with the Kirkton Woodland Heritage Group and their forester Mr Piotr Godziszewski. He has advised that current proposals are for phased felling and restructuring of that block of the plantation to the south of the power line which divides the plantation as a whole. Here, initially, windblown timber is to be removed and then felling of Lodgepole pine and sitka spruce in one or two phases (phasing yet to be agreed). The area will be restocked predominantly with native broadleaves from local seed sources. The area of primarily Lodgepole pine to the north of the Power line will be retained in the medium to longer-term as deer cover.

B16.16 No culling of deer is proposed in the near future and no restocking will be attempted before fences have been reinstated/restored around the southern portion of the Plantation. The intention at present is to seek funding under SRDP to erect a new fence along the northern margin of this southern block and at the same time to replace or repair fences around the remainder of the perimeter of this block. Before closure, a concerted effort will be made to drive any remaining deer out of the area before final closing of fences and before any replanting is undertaken. Thus no restocking will be undertaken before fences are secure around any area to be planted and where practicable deer will be driven out before fence closure.

B16.17 As above, it is intended that the separate area to the north of the power line will be retained. There are no proposals to reinstate fences and the area will be left to provide shelter for deer if within a somewhat smaller area. It is thus not anticipated that future management will have any significant impact on deer numbers or distribution within this part of the Management Area.

C FUTURE MANAGEMENT PROPOSALS OF INDIVIDUAL LAND-HOLDINGS: 2015-2020

It is a fundamental tenet of this Plan that all management shall be flexible and adaptive with prescriptions adjusted in the light of ongoing monitoring of both deer populations and impacts. In that context therefore all management proposals will be supported a detailed programme of monitoring of deer numbers, distribution and impacts [described in Section D below]. Thus, all proposals offered below should be seen as indicative only and subject to revision on the light of results of that ongoing monitoring.

C1 Applecross

C1.1 The Estate will continue to cooperate with crofting tenants of North Applecross in support of their initiatives in native woodland creation and management of deer in this area will continue to be for zero tolerance in protection of woodland plantings are regeneration. This is a clear collaborative initiative between the Estate and its crofting tenants.

C1.2 Management of deer will also be to exclusion on crofters' inbye land to the west of the South Applecross fence.

C1.3 Over the rest of the ground the Trustees seek to maintain a healthy deer population in balance with the carrying capacity of the ground and with the primary objective remaining delivery of good condition of natural habitats across the area. Sustainable deer management should however provide for a modest sporting harvest of between 50 and 55 stags per annum.

C1.4 In general it is considered that grazing and browsing pressures from current deer populations deliver a light or light moderate impact over much of the ground although it is recognised that in some localised areas impacts may be higher. It is noted that the Forestry Commission have expressed concerns about impacts from deer on the Airigh-drishaig woodland block and that recent Site Condition Monitoring within the Beinn Bhan SSSI/SAC have suggested that grazing impacts on alpine and subalpine heaths are resulting in declining condition of these designated features of the site (paragraphs B1.28, B1.29).

C1.5 In that context the Estate recognises that hind populations are to some degree larger than actually required in support of an annual stag harvest of 50-55 even allowing for the fact that Applecross may also export some stags which are shot on other property. The Trustees therefore propose a reduction in hind stocks and consider that reduction to a hind population of 500-525 is achievable over the lifetime of the plan.

C1.6 In addition to any such reductions in overall numbers, efforts will be made to increase a 'presence' on the ground both on Beinn Bhan and around Airigh-drishaig, both in terms of a greater time input in monitoring (to increase awareness of any build-up of numbers) and, where possible, increasingly targeting culls in these two areas for both hinds and stags.

C1.7 In addition to this efforts will be made to draw animal usage away from these areas with a programme of targeted muirburn. which will offer improved grazing opportunities in areas away Airigh-drishaig and the SSSI and thus reduce usage of these more sensitive parts of the ground.

C1.8 The Estate will develop a clear 5 year (or 10 year) muirburn Plan, showing on a map areas to be targeted in each year of the 5, or 10-year period. Muirburn will be given priority over other activities when conditions permit.

C1.9 Such targeted vegetational improvement assists in diverting animals from sensitive areas primarily during the spring and summer growing season. Although the highest parts of Beinn Bhan are unlikely to be used through the depths of winter when weather conditions force animals to lower elevation, the Estate will also consider localised provision of Rumevite blocks (or alternative feed-enhancers) as a further diversionary tactic over winter, to draw any winter concentrations of animals from sensitive sites.

C1.10 As noted above, it is a fundamental tenet of this Plan that all management should be monitoring-led. Proposals presented here should thus be seen as indicative only in terms of detail, and management must be responsive to results of ongoing monitoring of both deer populations and impacts and adjusted along the way as results of that monitoring advise whether or not some such adjustment is needed to meet targets set. In that context therefore it is considered that all management proposals must be accompanied by a detailed programme of monitoring of deer numbers, distribution and impacts. Given constraints on manpower and other commitments (such as maintaining a programme of regular muirburn (paragraph C1.9), foot counts may not be undertaken in every year, although these will continue to be undertaken as and when time permits.

The Estate proposes otherwise that, in collaboration with neighbouring Estates within the South West Ross Management Group, a helicopter count should be undertaken every three years, with ground counts continuing in intervening years, as and when time permits.

C2 Couldoran

C2.1 As above (paragraph B2.11), it is intended to maintain the (reported) historic quota of 6-7 stags a year which in the past has been seen as sustainable on the western part of the ground. If numbers seem appropriate to sustain it however, the Estate would consider increasing the quota over time to a maximum of 10 stags in any year.

C2.2 It is proposed to try to engineer a modest increase in hind numbers both to try and attract and hold stags in season and also in order to increase calf production within the Estate. This will be achieved primarily by reducing culls below maintenance; at present hinds are culled only on welfare grounds if clearly old, or in poor condition and culls are indeed below maintenance.

C2.3 In combination with this, and to ensure that any increase of numbers is contained within the core of the Estate, it is considered appropriate to try and improve vegetation condition and grazing quality (which will help facilitate an increase in numbers of both stags and hinds). To this end the Estate had proposed to instigate a regular programme of (small-scale) burning within the centre part of the estate. This intention however was thrown off course by the large-scale fire of June 2013 (paragraph B2.10). For the future however some targeted small burns might be attempted on the west side of Beinn a' Chait.

C2.4 As above, grazing improvements are likely not only to offer some increase in the holding capacity of the ground, but will also act to draw existing animals (and any increase) into the core of the Estate and away from the marches - addressing any fears that a build up of numbers might cause some problems in relation to increase impacts on woodland restoration blocks at Kinloch.

C2.5 The Estate currently has no plans for major woodland planting, although they may consider suitable small schemes if future funding under SRDP is appropriate.

C3 Kinloch

C3.1 Management for the future will continue to focus primarily on removal of any deer which manage to break through the fences (or swim round through Loch Dughaill) and establish within the restock areas and avoiding any significant increase in numbers on the open hill which might increase risk of incursions.

C3.2 Management of open hill populations shall largely be done in coordination /conjunction with Couldoran with cooperative efforts both in counting but also in deciding upon appropriate cull levels

C3.3 A policy of zero tolerance in relation to roe deer will be maintained for now within the more vulnerable, 1999, enclosure, but a more relaxed attitude will be taken in the older, 1994 enclosure with close monitoring of impacts and with action taken not when estimated populations reach some given threshold, but when recorded impacts on the vegetation itself are deemed excessive.

C4 Ben Shieldaig Estate

C4.1 Management continues to be driven primarily in protection of regeneration within the woodland blocks. However, it apparent that original proposals for maintenance of a resident population of some 30 animals within the fenced area (paragraphs B4.17, B4.18) are no longer appropriate

In the first case it is clear that numbers do not stay at constant levels throughout the year and that there is a distinct influx during the rut; the significant and unpredictable influx of deer in October means management based on overall annual density figures is not really appropriate. In addition from October to March the majority of the deer resident within the fenced area stay within the woodlands seeking shelter, resulting in higher local impacts than predicted if 30 deer were spread throughout the full 8300 ha of ground.

C4.2 A more flexible approach to management within the area is thus to be adopted in the future, responding to local population build-up, or to clear indication from the Estate's own surveys or as advised by SNH of browsing damage sufficient to compromise regeneration. However, it will be noted that culls are in the event not especially high and are unlikely at these levels to compromise the sporting interests of neighbouring estates. A deer leap is also to be installed on the southern deer fence above Loch Dughaill in the hopes that any animals trapped within the woodland blocks can seek exit.

C4.3 Open hill deer populations south of the fence will continue to be monitored and small numbers culled as opportunity presents, but numbers counted are not significant (paragraph B4.14). The Estate had in the past proposed a woodland creation scheme for this area (extending southwards from the existing woodland enclosure and with fences along the southern march and back along Loch Damph). This is currently in abeyance, but the Estate would be keen to revisit this proposal if and when circumstances permit. Given the low numbers of deer recorded in the area, it is not considered that this would have significant impact on neighbours to the south.

C4.4 The Estate will continue its programme of monitoring of woodland regeneration through fixed point survey (paragraph B4.25 above) and proposes to initiate a programme of habitat condition monitoring on areas of the open hill. Regular assessments of levels of impact by grazing and trampling will be made for different habitats across the property to record general pressures sustained and any developing hotspots.

C5 Ben Damph

C5.1 Management at Ben Damph continues to be responsive to what animals are felt to be on the ground in season. The Estate would seek to sustain a stag harvest of between 15 and 20 stags a year (including those shot within woodland exclosures) but would pull back from this aspiration if numbers on the ground suggested that this could not be met without damaging overall stocks.

Culls for hinds would aim for a maintenance cull based on whatever numbers future counts suggest are permanently resident on the ground. It is difficult at this point to be prescriptive and targets may be adjusted as appropriate in relation to the results of ongoing monitoring of deer numbers and habitat condition.

C5.1 It is agreed that in the future, regular counts will be undertaken in conjunction with neighbouring properties [specifically Coulin, Achnashellach, Fionnaraich and New Kelso. The Estate will also undertake regular assessments of habitat condition and herbivore impacts across the wider deer range.

C 5.3 Once better data are available on population size and structure, further decisions will be taken as to what might be appropriate harvest rates for stags and hinds, to restore the population to levels capable of maintaining former harvest levels of between 15 and 20 stags per annum.

C5.4 Throughout, it is recognised that Ben Damph shares the same effective population of stags (winter stags and those coming into the area after the break-out) as Coulin, Ben Shieldaig Fionnaraich and New Kelso. Hind populations are also to some degree shared between the Estates of this cluster (since many groups are hefted on marches between estates) and certainly must be considered as a combined resource in relation to its capacity for calf-production for the area. The estate is thus committed to working with neighbours to ensure regular coordinated counting of deer stocks on all estates – and sharing of information recorded, as well as to discussing proposed culls of both stags and hinds to ensure responsible joint management of a shared common resource.

C6 Coulin

C6.1 The Estate would wish to maintain its existing quota of between 30 and 35 stags although actual harvests will be adjusted in relation to numbers of animals seen on the ground and as noted, over recent years, it has not been possible to achieve the target stag cull due to a lack of available stags on the Estate (paragraph B6.37)

C6.2 In support of this aspiration the Estate would seek to support steady populations over the whole estate at up to 240 stags and in the first instance with a reduction of hind populations to between 280-300 hinds. While it is recognised that such a population remains somewhat higher than those needed to sustain a sporting quota between 30 and 35 mature stags, it nonetheless represents some reduction from current stocks (B6.28) while reflecting a continued desire to deliver higher levels of recruitment to try and restore former stag numbers (B6.44). Populations will however be kept under review and hind numbers reduced further (to 240) if/when stag numbers more stable.

C6.3 On the basis of a total unfenced area of 8202 ha (paragraph B6.18), a population at 240 stags, 290 hinds and their 95 calves would deliver an average density of 7.6 deer per 100 ha, although as noted deer are not distributed evenly across the property and local densities in the south may be higher.

C6.4 Winter feeding will continue in the site to the south of Hill Park Plantation, on the Doire Beithe and to the east of the Torran Plantation.

C6.5 The Estate has just confirmed a long-term Strategic Forest Plan (2013-2033)³ which provides for substantial ongoing management of the existing woodland resources. Within the time period of the current deer plan, the Estate has proposals to fell the upper part of the Torran Plantation. Felling is limited to a 99.2 hectare coupe of lodgepole pine and will be undertaken as a single operation.

³ Coulin Estate Strategic Forest Plan 2013-2033; CKD Galbraith February 2013

After a five year fallow period to mitigate against pine weevil and *Dothistroma* Needle Blight infection, the area will be deer-fenced and planted with Scots pine and Native broadleaves at variable densities as suits local site conditions. At lower elevations pockets of higher density pine should allow for future thinning and modest yield of timber. Native broadleaves will be focused in riparian gullies and the upper margins of plantable ground and extended up slope (as at paragraph 6.5). The self-contained, lower of the Torran (50.48 hectares) will be lightly thinned to improve stand structure, encourage crown development and improve windfirmness.

C6.6 As noted at paragraph B6.12, a major new enclosure has been erected to the west of Loch Clair, to embrace the Loch Clair pinewoods and the former Allt nan Luib enclosures. A further scheme is proposed within the period of this Plan in extension of the existing enclosures at Easan Dorcha to a total area of c 150 ha, and additional planting within that of 23.7 ha; and (paragraph C6.5) in upwards extension of the Torran Plantation site to a somewhat higher altitude on Carn Dhomhnuill Mhic a' Ghobha to remove the existing hard line of the upper fence-line and present a more natural feathering of woodland up the slope. This latter project will however not take place until felling and restructuring of the upper part of the Torran Plantation itself is in hand (paragraph C6.5) although this is phased to occur within the period 2014- 2017. A similar small extension, feathering tree cover up to the treeline, is proposed for Hill Park.

C6.7 Full details of these and other proposals phased in the longer term are presented in the Estate's Strategic Forest Plan. All phasings of felling and restocking are planned to ensure that deer in all parts of the Estate retain access to necessary winter shelter at all stages. As enclosures become established and can safely be removed, further enclosures will be erected to provide a shifting pattern of regeneration across the estate. Wherever new enclosures are planned which embrace existing schemes, redundant fencing internal to the new enclosures will be removed, with new fencing proposed between 2015 and 2020 at Hill Park and Easan Dorcha of 9518 metres, replacement of existing fencelines at Torran of 4611 metres and a total proposed fence removal by 2020 of 10,880 metres.

C6.8 In summary, future deer management will be focused on

- Maintaining a balanced integration between forestry, sporting interests and conservation interests on the Estate.
- Sustaining sporting shooting of stags on the Estate with the aim of rebuilding harvests to between 30 and 35 stags a year. This will be sustained in the first instance on a target spring deer population over the whole estate of up to 240 stags, 280-300 hinds and 95 Calves. Deer numbers and habitat impacts will be carefully monitored to ensure such population levels are sustainable without deterioration of habitat condition.
- Restructuring and enhancing woodland cover throughout the Estate (not merely within designated sites) by phased removal of exotics and gradual replacement with native species.
- Where any changes to distribution of woodland area are planned efforts will be made to ensure that impacts from deer do not increase on any remaining woodland outwith exclosures. Targeted culling will take place on designated sites outwith fenced areas, if a requirement is shown through site condition monitoring.

C7. Kinlochdamph

C7.1 The Estate proposes an annual stag harvest between 15 and 20 stags per annum, with 20 as an absolute maximum in years when there does appear to be a surplus of stags. Although some hind shooting is let, no stags are let; thus there is no pressure on numbers and culls will be reduced if it is clear that numbers on the ground are low.

C7.2 In support of this quota and in the interests of returning to the wider stag population sufficient recruits to replace those harvested on Kinlochdamph at maturity, the Estate proposes to maintain a hind population of the order of 150-180. It is recognised the populations of hinds in particular still remain rather mobile and thus quite wide limits must be set around this average figure. Careful monitoring will be undertaken of numbers and distribution, as well as of levels of impact to ensure that impacts do not rise within the SSSI. In maintenance of this hind population, culls of adult hinds will be set initially at 20-25 (these figures not including any calves shot with milk hinds)

C7.3 Cull effort will continue to be targeted primarily within the SSSI and especially, as at present, on the faces of Sgurr a Gharaigh (paragraph B7.19) as a further mechanism to try and reduce grazing/trampling impacts within the more sensitive areas within the SSSI

C7.4 Winter feeding will be continued in provision of licks and bulk foods such as turnips on either side of the main hill track. Feeding will not be undertaken within the boundary of the SSSI.

C8 Tullich

C8.1 Stalking on Tullich is likely to continue to be leased for the foreseeable future. Stag numbers in the local area have clearly declined (as reflected in a decline in harvests on Tullich since 2006) but it would be the Estate's intention to continue to take stags up to former historic levels of around 10 per year if numbers permit.

C8.2 It is accepted that maintenance of such a quota is to be seen within the context of a generally increasing combined quota over many of the neighbouring Estates to the west (Lochcarron, Kinlochdamph, Glen Mhor, Couldoran) and that it is thus essential that members of this sub-Group of estates should meet regularly to coordinate management and discuss sustainable harvests. Efforts should be made to coordinate counts and to ensure that combined stag harvests remain sustainable.

C8.3 Hind culls at present will continue to be targeted for maintenance. To the extent that a decline of numbers is noted within the wider catchment (and decline to levels where it would appear that the level of recruitment of stag calves may be compromised), hind culls would be reduced on Tullich to allow some regrowth of hind numbers.

C8.4 In the same way it is recognised that decline of hind numbers here in the east, together with possible movement of hinds away from Tullich also in the west (onto Glen Mhor) and to the northwest onto Kinlochdamph), may reduce the capacity of the Estate to attract and hold stags in season. The estate will consider appropriate habitat management measures in an attempt to improve attractiveness of the hill grazings for hinds over the summer period to try to reverse this drift.

C9 Lochcarron Estate

C9.1 Following the sale of Glasnock/Kinlochdamph, management of the remaining area of Lochcarron was, at the time of the 2009 Plan still extent undecided. It was noted however that average numbers of stags culled from this section of the ground in the past (2002-2007) had been 7.5 (or 8 including those shot out of season in woodland blocks); culls over the period from 2009 to 2013 have indeed been at an average of 7 per year, although it is noted that higher numbers were taken again in 2013.

C9.2 It is the intention also to attract more resident hinds onto the ground or in effect greater residency of those hinds. To this end the Estate has started to put out mineral blocks and are starting to supplement these with a recommended feed block.

C9.3 Previous hind culls from this northern part of Lochcarron Estate (thus excluding land within the North Strome peninsula) have again averaged around 7.5 per annum (2002/03 – 2007/08), although over the period 2009/10 to 2013/14 culls have averaged only 6 per year. Future culls are likely to remain of this same order.

C9.4 Throughout, it is recognised that this part of Lochcarron shares the same effective population of stags (winter stags and those coming into the area after the break-out) as Kinlochdamph, Tullich and Glen Mhor. Hind populations are also to some degree shared between Lochcarron, Glen Mhor, Kinlochdamph and Tullich (since many groups are hefted on marches between estates) and must be considered as a combined resource in relation to its capacity for calf-production for the area. The estate is thus committed to working with neighbours to ensure regular coordinated counting of deer stocks on all estates – and sharing of information recorded, and future cull policies for both stags and hinds will be determined in consultation with neighbours to ensure responsible joint management of a shared common resource.

C9.5 In this same context it is noted that access to new woodland on Kinlochdamph and Glen Mhor has been facilitated in recent years by active removal of fences around the Coille Dubh and Druim Dubh woodland enclosures on Kinlochdamph (paragraph B7.12) and the gradual failure of older fences around Glen Mhor. As part of this same initiative of increasing the amount of woodland shelter available to deer in this part of the Management Area and maintaining a more continuous distribution of such resources across the area, the Estate would wish to consider opening up the current woodland enclosure at Tornapress to allow access to deer from the southeastern and eastern sides; (the fence by the roadside would be maintained).

C9.6 Growth and establishment within this woodland scheme has been patchy and it is felt that currently some areas within the block are still rather too vulnerable to future damage for fences to be removed at the present time (even though the scheme is out of the grant period). However, it is the intention in the longer term to open this area to deer, once it is felt that the bulk of the area is sufficiently well-established and when there is some confidence that the majority of the trees are no longer vulnerable to damage. Further consideration will thus be given to opening this area to deer over the course of this Plan period as a contribution to a more even distribution of access to woodland cover across this part of the Management Area. The Estate will continue to monitor the status of the Tornapress scheme and will discuss further with SNH staff, who have already been advised of this longer-term intention.

C9.7 It is noted that opening up of this Tornapress enclosure will allow renewed access to that part of the Allt Mhor Gorge currently protected within the perimeter fence. However: the woodland feature within the Gorge was not assessed as in unfavourable condition in routine Site Condition Monitoring, even before erection of the Tornapress enclosure, and thus it considered highly unlikely that allowing access to deer again in the future will result in any deterioration of the feature. Trees within the Gorge are in any case largely inaccessible to deer because of the nature of the terrain; in addition any impacts from deer resulting from removal of the fences will now be diffused and spread more widely through a much larger woodland area now established across the wider enclosure of the Tornapress WGS.

C9.8 While no formal counts are undertaken in the North Strome section of the estate, casual observation suggests that numbers may be higher than formerly believed. Because much of the land to the east of embraces the built up areas of Lochcarron Village, while a significant part to the west is covered by crofts, common grazings or Forest Enterprise woodlands, there has been a tendency to 'write it off' as a sporting part of the Estate. This is perhaps underestimating the area's potential and not taking full advantage of the opportunities offered.

It is suggested that the Estate considers more regular use of this part of the Estate which might help make more sustainable the higher harvest rates taken across the Estate in recent years.

C10 Glen Mhor

C10.1 Future management on Glen Mhor aims to establish a population of red deer, resident or largely resident within the property, appropriate to sustain a harvest of mature stags at around 6 - 7 per year.

C10.2 Stags remain highly mobile across a wide area especially in season; thus winter counts are not necessarily indicative of what may be available to support culls over the summer season. However, responsible management would seek to put back into the pot (put back into the wider stag population) sufficient recruits to replace those harvested as adult, thus (allowing for losses) aiming for a recruitment of perhaps 10-12 stag calves per year or perhaps 25 calves in total. It is suggested that such recruitment would be delivered by a hind population of between 60 and 70 resident hinds (equivalent to those recorded in recent counts).

C10.3 Together with their calves and a population of perhaps 30-40 stags of mixed age, this would deliver an effective density of between 10 and 11 deer per 100ha, which is considered entirely appropriate given the quality of the ground and the status of the vegetation, especially after the prolonged period of protection from browsing.

C10.4 Culls will be adjusted in the light of continuing counts in order to deliver this population target, with culls subsequently adjusted for maintenance. Maintenance culls for the proposed target population of 60-70 hinds would be of the order of 9-10 mature hinds each year.

C10.5 It is the Estate's intention to clear the parks around the house and improve the grazing, in order that this remains a focus for hinds. In addition, mineral blocks will be provided on posts on either side of the hill track north of the Glen in an effort to attract stags and perhaps hold them longer on the property before the break-out and to attract more hinds into the area from the south.

C10.6 Currently, a small number of cattle are pastured in the larger field towards the march with Ardoch. It is the Estate's intention to increase the number of hill cows maintained to perhaps 10-12. While these are largely to be maintained in fenced parks on the lower ground, there may be some merit in turning these out to the hill for periods over the summer months.

C10.7 There are significant numbers of roe already present within the Estate and as established trees mature and the woodland areas tend towards a more closed canopy cover, there may also be merit in establishing high seats in more densely wooded areas of the lower slopes to offer some diversity in stalking by offering woodland stalking of both roe and red deer.

C10.8 Finally, the Estate is proposing shortly to build a new, modern deer larder with the intention of offering use of these facilities also to neighbouring properties whose facilities are more limited.

C11 Fionnaraich

C11.1 Because of other commitments and because Fionnaraich is maintained primarily as a recreational resource, management on the property is restricted to active culling and no other land management is currently carried out. Given restrictions of available time, Fionnaraich might expect to maintain its current quota of up to 4 or 5 stags with a maximum of up to 7 taken only in years where significant number are seen on the ground.

C11.2 In the absence of any recent count figures, it is hard to assess what would be appropriate culls of hinds (paragraph B11.9). It is suggested that in the first instance, Fionnaraich should aim to take a cull of between 3 and 4 hinds a year, with numbers revised once more information becomes available from ongoing monitoring. Any decision - and any subsequent target set – should be considered in conjunction with New Kelso, as a combined hind cull to be taken over the two estates. In the same context it is clearly highly appropriate that all management on Fionnaraich continues to be closely integrated with that of neighbouring New Kelso, permitting management decisions, and yearly culls to be determined over a larger effective management area.

C11.3 For the present, proposed cull levels remain low. However, it is recognised that both hind and stag populations are shared with a number of neighbouring Estates in this local geographical area who all share the same effective biological population of deer. It is therefore considered that members of this sub-Group of estates should meet regularly to coordinate management and discuss sustainable harvests to ensure that management efforts are well-integrated and fully-compatible. Efforts should be made to in particular to coordinate counts and culls with New Kelso.

C12 New Kelso

C12.1 New Kelso is managed primarily as a livestock unit, producing a high quality product in terms of our lamb, beef and venison off the Estate and the deer management is undertaken largely for recreational purposes. Little change is anticipated to current management practice, with some 10-12 stags shot each year and hind culls targeted at maintenance of existing population numbers.

C13 Achnashellach [North]

C13.1 Plans for the future are to maintain populations of stags and hinds more or less at present levels, to sustain a cull of up to 8 stags from this beat per year. Hind culls will continue to be targeted towards maintenance of steady state of hind populations at a level of between 140-145.

C14 Ledgowan [North]

C14.1 It is clear that the neighbouring Estates of North Ledgowan and Coulin (with, perhaps to a lesser extent, North Achnashellach and Ben Damph) form a rather separate subcompartment within the South West Ross Deer Group area, and to an extent depend on the same shared deer resource. Given recent concerns about the sustainability of combined harvest levels within this area it is clearly essential that members of this sub-Group of estates should meet regularly to coordinate management and discuss sustainable harvests. Efforts should be made to continue to coordinate regular, annual, counts and to ensure that combined stag harvests remain sustainable.

C14.2 Given the paucity of past counts it is hard to assess current population levels and appropriate harvests. The Estate is committed to institute a programme of regular end of winter counts in cooperation with neighbouring Coulin and Achnashellach in order to get a better handle on true populations present and ensure that harvests are sustainable. In the meantime, it may be presumed that stag culls from this northern section of the Estate will remain at historic levels of between 20 and 22 per year. Hind culls are currently set of the order of 15 per year but cull levels will be reviewed, if appropriate as more information becomes available from future counts, to ensure stability or effect some decline in resident hind stocks.

C14.3 Deer have access to winter feeding put out for livestock; the Estate proposes a programme of targeted muirburn in order to reinvigorate the hill ground and provide improved grazing for deer and domestic stock.

C14.4 The Estate is considering plans for a number of forestry/woodland creation schemes, subject to availability of funding, recognising that if this was to take out significant acreage of deer range, there might be a need for some compensatory reduction of deer numbers overall, by removing those which would otherwise have occupied the planted areas.

C15 Forestry Commission Scotland

C15.1 Consistent with the main objective of protecting growing trees and timber crops from browsing damage, FCS policy remains to control deer numbers to maintain minimum presence in areas or compartments where trees are at a growth-stage where they may be susceptible to damage. Control efforts may be relaxed in isolated blocks which are no longer at a vulnerable stage of growth.

However, culls within the north block at Achnashellach are not believed to have any impact on wider open hill populations of the South West Ross Management Area.

C15.2 Numbers culled have reduced over recent years, largely in response to completion of the northern perimeter fence with Achnashellach Estate. There is a possibility however that numbers of deer using the FC holding may increase again in the future to the recent loss of wintering ground to the east as a result of new woodland schemes. If this appears to be an issue, FCS may have to consider roadside fencing of the northern block at some point.

C16 Other areas:

C16.1 As already noted: management objectives **Ardoch** are in the short term to maintain the current deer control measures within the forestry, with a policy of zero tolerance. However it is noted that this forestry block is securely fenced and there are few incursions.

C16.2 Current proposals for the management of **Kirkton** Woodlands are for phased refelling and restructuring of that block of the plantation to the south of the power line which divides the plantation as a whole. Here, initially, windblown timber is to be removed and then felling of Lodgepole pine and sitka spruce in one or two phases (phasing yet to be agreed). The area will be restocked predominantly with native broadleaves from local seed sources. No restocking will be attempted before fences have been reinstated/restored. The intention at present is to erect a new fence along the northern margin of this southern block and at the same time to replace or repair fences around the remainder of the perimeter of this block. Before closure, a concerted effort will be made to drive any remaining deer out of the area before final closing of fences and before any replanting is undertaken. Thus no restocking will be undertaken before fences are secure around any area to be planted and where practicable deer will be driven out before fence closure.

The area of primarily Lodgepole pine to the north of the Power line will be retained in the medium to longer-term as deer cover.

C16.3 **Reraig Forest.** The ultimate objective is to manage deer fenced enclosure erected within the property (inside the perimeter fence) as a put-and-take enterprise. Managers are well aware of concerns within the Group about escape of introduced stock and will carefully monitor and maintain fences.

C16.4 As numbers of wild deer increase within the property, small numbers of wild stags may continue to be harvested, but current harvest rates (at 4 or 5 animals a year) are modest.

D. GENERAL, GROUP-WIDE, CONSIDERATIONS:

General stocking rates and ongoing monitoring:

Monitoring of deer populations; population modelling

D1.1 Most members of the South West Ross Deer Management Group have undertaken regular ground counts of open hill red deer for a number of years. Counts have not routinely been undertaken however on Ledgowan, Ben Damph, Fionnaraich or until recently, New Kelso or Glen Mhor or in any of the properties formerly owned by Forestry Commission Scotland. It is thus hard to derive overall estimates for the Management Area. It is the Group's intention that more formal counts shall be coordinated throughout the Management Area in future years; where practicable coordinated counts have been undertaken on an annual basis. Counts will continue to be undertaken on foot, but the Group will consider undertaking a helicopter count of the main management area at least once in every 3 years if funding permits.

D1.2 As noted at paragraphs A4.5 – A4.8 we may identify a number of clear subpopulations of open hill red deer within the overall area covered by the Deer Management Group. While stags may be more mobile, especially during the rut, for most of the Management Area we may broadly define subclusters of Estates sharing the same biological population of animals, or at least for whom there is more regular exchange of both stags and hinds on a daily or seasonal basis.

D1.3 Thus: populations of Coulin, Ledgowan, Ben Damph and Achnashellach (North) are effectively continuous; but Ben Damph and Achnashellach at least also show regular exchange of animals with Fionnaraich and New Kelso to the west. Fionnaraich and New Kelso also show some exchange with the lower ground of Tullich, but populations of the higher ground of Tullich are in general more closely linked with Glen Mhor, Lochcarron, Kinlochdamph and Couldoran to the west.

Kinlochdamph in turn does link with the open hill ground of Ben Shieldaig, but numbers here are very low as are those of the open hill ground of Kinloch. The bulk of Ben Shieldaig and also much of Kinloch are enclosed within fences designed for protection of woodland regeneration so that movements are more restricted, although there is some ongoing exchange between the Kinloch and Ben Shieldaig population. Both by geography and because of the lines of strategic fences, Applecross is largely isolated from other properties within the Management Area, although there may be some regular movement between the eastern corries of Beinn Bhan and Couldoran, and there is more major emigration of stags during the period of the rut.

D1.4 Recorded counts and culls will be used to model likely future population trend and advise within each sub-area where there may be need for alterations to ongoing management/ future cull levels to achieve targets sought. The South West Ross Group as a whole will consider whether or not occasional meetings of these different "subGroups" in the future may be helpful in delivering collaborative management.

D1.5 Target populations currently proposed within these sub-population areas are summarised in the Table below, alongside proposed annual culls to be taken from this population.

Figures for offtake are necessarily only indicative since on many properties culls are taken primarily to prevent/address woodland damage and are thus responsive to circumstance rather than regular or predictable. In such cases average culls over the past 5 year period have been inserted alongside the more predictable sporting harvests of primarily sporting estates. The table presented is however not especially informative since a number of estates are proposing to undertake reductions in hind population over the course of the plan and thus offtakes are not calculated for maintenance of steady state.

Population	Target Numbers			Average Combined Harvest		
	Stags	Hinds	Calves	Stags	Hinds	Calves***
Applecross, Couldoran, Kinloch	490	535-550*	180-185	70	**	
Lochcarron, Tullich, Kinlochdamph, Glen Mhor	100	370	120-125	40	35-40	
Ben Shieldaig, Ben Damph, Fionnaraich, New Kelso	None set	None set		35	35-40	
North Achnashellach, Coulin, Ledgowan	420-450	600*	200	65		

*Subject to review. Applecross and Coulin may both may propose further reductions in hind populations; see section C.

** at least over the first years of this Plan, Applecross will be undertaking a deliberate reduction cull; again see section C

*** calves to be culled in relation to milk hinds taken

D1.6 Successful management of a deer stock depends not only on monitoring population trend, and ensuring that numbers and population structure (ratio of stags: hinds: calves) remains as desired; management also requires careful assessment of cull levels to be taken to sustain a population at steady state, or engineer a desired reduction (particularly in terms of hind numbers) where appropriate. Towards this, a close eye should be kept on recruitment rates and rates of natural mortality. These measures in addition offer indicators of the general condition and welfare status of the population within each area

D1.7 Calving rates - or at least recruitment of surviving calves, may be assessed from calf:hind ratios in spring counts, as long as these are reasonably accurate and there is no gross misclassification of for example well-grown stag calves as young hinds. **It is thus understood that every effort should be made in annual census to assess separately numbers of hinds and calves where possible (or at least assess calf: hind ratios for those groups where discrimination is straightforward)**

All animals found dead should be recorded, and where possible aged as accurately as possible from tooth wear. Estimates of mortality rates of yearling stags and hinds, and more mature animals may be used to refine projected rates of population increase based on calf recruitment.

D1.8 Much information may also be obtained from the cull itself. Trends in weights of yearling males and adult females are the most sensitive indicators of changing condition within a deer herd (Putman and Langbein, 1992). Some stochastic variation in recorded weights may be expected between years, and analyses should not be based simply on comparisons across two consecutive years; however four or five year trends in weight offer a good index of population performance which once again offers important feedback to managers on how their population may be performing – as well as providing an ‘early warning’ of any problems which may be developing.

D1.9 Pregnancy rates should also be recorded (pregnant/not pregnant, and for roe deer, the number of embryos present) for all females culled at least after January 1st when foetuses should be readily visible. Obvious changes in pregnancy rate over time may be used to double-check changes in recruitment apparent from simple calf/hind ratios; pregnancy rates again offer a simple indicator of condition, with regular pregnancies among younger red hinds (2 year old, or younger) indicating a population well in balance with available food resources.

D1.10 In relation to this member Estates are encouraged to keep careful records for each animal culled of location shot, approximate age (from the stage of tooth eruption in the lower jaw), whole carcase weight (entire eviscerated carcase) as well as dressed carcase weight (head off, feet off).

In the interests of monitoring population condition and in determining that carcasses are safe to enter the human food chain, a record should also be kept of any evidence of disease, external or internal parasites (fluke, or lymphatic cysts). Many estates already have bespoke larder record sheets but all are encouraged to review recording methods in the context of Best Practice Guides (below).

D1.11 Individual estates and groups of Estates within the sub-population clusters identified above will attempt to use available data to develop rolling population models that aim to show how proposed management measures are expected to influence the population over time (see for example models presented at <http://www.snh.gov.uk/land-and-sea/managing-wildlife/managing-deer/understanding/deer-population-management/>)

It is felt that with limited count data available at present (paragraphs A5.22, A5.23) it is not practical to develop such models at the current time; critically, population modelling should be seen as an aid to successful management, not an end in itself. However the group will give consideration to development of such population models within subpopulation areas when more consistent count data become available (A5.24). It is accepted that this makes the deer population management much more visible to the DMG (and others).

Monitoring of habitat condition:

D1.12 Where a major objective of management is to engineer some improvement in vegetation quality, or where some change in animal density is proposed, it is appropriate also to undertake some simple monitoring of the vegetation itself, to ensure that adjustments of animal density are, in the one case, sufficient to deliver the vegetational recovery required, or on the other hand are not imposing excessive increase in impact. Such measures are actually of general value for all Estates, outwith areas designated for primarily conservation objectives, since simple measures such as these offer some information on the relative balance of animal numbers with the capacity of their vegetational environment to support them – and to continue to support them in a sustainable way. Such monitoring of habitat impacts is also strongly encouraged under the new Benchmark Scheme for Deer Management.

D1.13 Monitoring of habitat condition and herbivore impacts has not routinely been undertaken within the Group Area. Although a number of individual Estates have undertaken some form of monitoring of browsing impacts within the area of native woodland restoration schemes [Applecross, North Applecross, Ben Shieldaig, Kinloch], few Estates have undertaken routine monitoring of the condition of open hill habitats. The South West Ross Group proposes to initiate a more formal programme of assessment of habitat condition more widely across the DMG area and training will be provided to staff on individual estates over the coming year.

D1.14 Within open hill habitats, it is anticipated that each estate will monitor up to 30 areas of dry heath, wet heath and blanket bog distributed in different parts of the estate, on a 3 year cycle [thus in effect monitoring 30 areas of dry heath year 1 and year 4; 30 areas of wet heath year 2 and year 5; 30 areas of blanket bog, year 3 and year 6, etc.]. Other habitats may be substituted where it is felt that these are more representative or of particular significance on any given Estate.

While recording will focus in each year on the primary habitat selected for that year, additional samples will also be taken in adjacent habitats to deliver in addition an estimate of average impacts in that geographical part of the estate as well as impact specifically on the primary vegetation type targeted.

D1.15 Woodland areas will be separately surveyed within individual estates and clearly habitats which are designated features of SSSIs or SACs will be subject to routine Habitat Condition Monitoring by SNH.

D1.16 Levels of impact sought will depend in large measure on the balance of interest of individual properties with different thresholds in terms of whether these are primarily managed for conservation, for livestock agriculture, or sport or as mixed use properties. However managers will anticipate that in general, recorded impacts from deer should not exceed light-moderate or moderate levels and should not reach levels at which some decline in habitat condition is recorded through time.

Other issues:

Roe Deer:

D1.17 A number of Estates have significant populations of roe deer and numbers are likely to increase with significant increase in the number of initiatives being undertaken for creation or restoration of native woodland. While occasional roe deer are shot on some properties [and numbers reported to the Deer Group], there is no communal policy. The Group does urge members to be aware of increasing roe numbers and expansion into areas which were recently devoid of roe, such that any fencing to be undertaken for new woodland initiatives should not simply seek protection from red deer, but should consider adopting the higher specifications (and smaller mesh sizes) required for current or possible future need also to exclude roe.

D1.18 However, while roe are capable of causing very significant damage both in commercial and amenity woodland areas, if they reach sufficient density; at low densities their impact can actually be of advantage in breaking up the even-aged nature of unbrowsed regeneration and producing a degree of spatial heterogeneity/diversity (since their browsing tends to be rather 'localised' with certain areas within their range clearly preferred and browsed more heavily than other, adjacent areas). Because of this, the Group does not wish to establish any fixed policy for management of roe but advocates that management should be adaptive and respond to close monitoring of impacts, with action to be taken not when estimated populations reach some given threshold, but when recorded impacts are deemed excessive.

Non-Native species:

D1.19 Sika are regularly observed in the area and increasingly encountered on a number of Estates, especially towards the east of the Management Area. Sika may cause very significant damage to unfenced -or fenced - woodlands, if they break into restoration enclosures. Further, hybridisation between sika and red deer and the potential threat posed to the integrity of native red deer populations, is now a matter of widespread concern. While it is probably not practical to eliminate sika from parts of Scotland where they have become well-established, it may be possible to maintain control and protect the genetic integrity of local red deer populations. The Management Group will continue to pursue a policy of shooting sika when encountered to try and slow the rate of colonisation and may seek authorisation from SNH, for permission to shoot out of season on grounds of conservation of local red deer stocks.

D1.20 Muntjac are not currently present in the Management Area. Any evidence of colonisation or possible establishment of muntjac will be immediately reported to SNH.

D1.21 Feral goats did occur in parts of Management Area in the historic past but if any remain, numbers are extremely low. The status of populations is currently unknown but will be kept under review.

Best Practice:

D1.22 The Group as a whole endorses the Government's Code of Practice on Deer Management and the ADMG's Principles of Collaboration in relation to Deer Management. In day to day management, managers will follow the individual prescriptions of individual Best Practice Guidance notes or other relevant Guidance (e.g the Muirburn Code). All Estates are fully committed to membership of the South West Ross Deer Management Group and will ensure a representative attends all Group meetings where practicable. Estates will continue to exchange information on counts and culls and other ongoing management practice with other members of this Management Group.

Training:

D1.23 The Group is committed to increasing standards of competence and to offer and deliver any necessary training to staff in relation to management practices. The majority of retained stalkers or managers on individual estates hold DMQLevel 1 and a significant number also hold DMQ2 as well as other qualifications such as the Lantra Certificate in Wild Game Meat Hygiene; ATV use/maintenance; use of herbicides etc. [Table below] :

The South West Ross Group keeps and updates a register of skills of practitioners and is committed to increasing this skills base. Training courses will be held over the coming years in Habitat Impact Assessments and all stalkers will be encouraged to achieve DMQ2 in the course of the current 5 year Plan period.

Name of Estate	DMQ1/DSC1	DMQ2/DSC2	Others [e.g]
Achnashellach Estate [North]	2	1	SNH Fit and Competent register Scottish Quality Assured Venison
Ardoch	1		
Applecross	2	1	
Ben Shieldaig	1		
Ben Damph	1 in progress		
Carronach			
Couldoran			
Coulin	2	1	'Trained Hunter' Qualification for Large and Small Game Meat Hygiene
Fionnaraich			
Glen Mhor			
Kinloch	1 f/t; 2 p/t		
Kinlochdamph	1	1	
Ledgowan [North]			
Lochcarron			
New Kelso	3	0	
Tullich			
FCS North Achnashellach			
TOTAL			

Many also have : Sit-in ATV Skid Steer All Terrain; Sit-astride ATV;

Welfare:

D1.24 Data on annual recruitment rates (from end of winter counts) as well as data on winter mortality are gathered by most Estates; SWRossDMG and individual Estates also consider carefully the possible implications of restrictions on access to cover/shelter when reviewing proposals for new fencing or in the context of phasing of felling or enclosure-for-restocking within individual Estates' proposed Forest Plans.

D1.25 On other welfare issues (e.g. during culling operations) the Group is committed to guidance offered by BPG to minimise risk of injury or orphaning of dependent juveniles (thus for example, whenever practicable, culling the calf first when culling mother-calf pairs).

Economic Costs and benefits

D1.26 The Group will also seek to compile an assessment, at Group level, of the economic costs and benefits associated with Deer Management in South West Ross, although data for individual properties will be kept confidential and only summary figures released.

Such costs and benefits include: how many full-time and how many part-time staff are employed within the Group Area in relation to deer and their management; salaries/wages paid to staff, additional costs [accommodation of staff]; capital costs for purchase and maintenance of fences, vehicles; fuel costs etc... and in terms of **benefits**: income from sporting lets; income from accommodation rental associated with sporting lets, venison income, investment in conservation initiatives etc.

Communication:

D1.27 The SWRDMG holds regular meetings which are in general well-attended by members. These meetings offer a forum for regular exchange of information on counts and culls and other routine monitoring information. Members are fully committed to attendance at such meetings or where unable to attend, to send representatives.

More informal meetings are convened from time to time among member Estates of some of the subpopulations identified above, to coordinate counts and discuss the sustainability of combined culls. The Group as a whole will encourage the development of these sub-cluster meetings across other discrete subpopulations within the overall management area and individual development of 'local' population models to inform local management in these areas.

D1.28 The Group will consider establishing its own website linked to the website of the ADMG. This deer plan will be uploaded to that site together with minutes of regular meetings of the DMG and a brief Annual Report of activities carried out in the preceding period.

Education and wider Engagement:

D1.29 The Group already acts as a wider forum for discussion of matters relating to wider land management within the area and groups such as the Kinloch Woodlands Charitable Trust seek to develop educational opportunities wherever possible. The Group and individual Estates have a good relationship in the main with local crofter interests, with Estates such as Applecross widely supporting Crofter Forestry Schemes both in North and South Applecross and liasing over wider deer management. FCS have recently disposed of a number of former commercial woodlands in the Management Area and the Group has been active in seeking involvement with the new Kirkton Woodlands Heritage Group in Lochcarron and other new (private) owners.

D1.30 The DMG is already widely engaged with a number of wider community stakeholders and community groups. To ensure ongoing engagement with these wider local and community interests, representatives of local Community Councils and other appropriate local bodies from within the Management Group Area will be invited to the Group AGM.

Public Access; Public Safety

D1.31 Many of the properties of South West Ross have significant public access; as noted there are a number of areas designated as of especial conservation interest and much of the area falls within a National Scenic Area. Access is encouraged and there is signage advising of deer management activities within the area. All members of the Group have been encouraged to contribute to the SG initiative “Heading for the Scottish Hills” and to complete the associated questionnaires.

D1.32 There are relatively few traffic accidents involving deer within the area although occasional incidents are reported (paragraph A5.26 and Map 8). SWRDMG will continue to monitor such incidents and will collate statistics on DVCs noted or attended (together with records of culls and winter mortality) at its regular meetings. These statistics will be submitted by the Group annually to contribute to the national DVC database at www.deercollisions.co.uk. If DVCs are perceived as an issue in the future, SWRDMG will liaise with neighbouring Deer Management groups to act as a forum to identify and assist in the delivery of appropriate actions/solutions; SNH/Transport Scotland/Local Authority will be involved as required.

D1.33 In production of venison for human consumption, the Group is committed to promoting Trained hunter status and encouraging those handling carcasses to obtain e.g. Lantra Certificate in Wild Game Meat Hygiene. Estates are to be encouraged to register as approved outlets under the Scottish Quality Assurance Scheme for Venison Production [SQWV]. Uptake of this, and of the number of employed staff trained to DMQ1 and DMQ2 to be reviewed on periodic basis.

D1.34 The Group aims to increase awareness of Lyme disease and other tick-borne diseases amongst stalking staff and guests/visitors. In general however, it is felt that action lies with individual landholdings. The HPS Lyme awareness leaflet could be included as part of estate visitor information. The Group is also aware of the risk posed to UK deer populations if Chronic Wasting disease were ever to be imported into this country. The Group will circulate members with information on the disease and its identification: <http://www.snh.gov.uk/docs/A1007359.pdf>. Member Estates will be encouraged to increase biosecurity measures for visitors or paying guests arriving from North America.

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Summary of Public Interest Benefits and Action Points:

	Requirement	Action	Action Points
1	Develop effective mechanisms to manage deer	The Group has revised its former Deer Management Plan and offers here a Plan for the period 2015-2020. As a whole the Group employs 8 full-time staff and 7 part-time staff in deer management. Of owners and staff, 13 hold DMQ1 and 4 DMQ2. The Group as a whole is fully committed to ensuring continuing training and development.	Progress under the Plan to be reviewed at annual meetings and full Plan to be updated in 2020. Group to encourage all owners and staff to seek suitable qualifications and to update records of DMQ qualified staff at annual meetings [Annual]
2	Contribute to the delivery of designated features into Favourable Condition	The condition of all sites is reviewed in this Plan with reference to the latest Site Condition Monitoring or Herbivore Impact assessments reported by SNH. Actions are included in future management proposals for individual Estates (or groups of Estates where a designated site may encompass more than one landholding) to address reported impacts.	Group /individual estates to initiate programmes of routine Habitat Impact Assessment. Results of ongoing Site Condition Monitoring of designated sites to be reported to Group meetings as soon as completed and necessary actions by individual estates/Group to be discussed
3	Manage deer to retain existing native woodland cover and improve woodland condition in the medium to long term	The South West Ross Management Area includes a total area of 4373.17 hectares of native woodland and 2243.6 hectares of commercial or mixed woodland. Much of this area is fenced, but there is active monitoring throughout to assess browsing impacts and plans for individual Estates contain provision for other measures to address developing impacts in commercial and native woodland sites, especially within designated areas.	Impacts in woodland areas to be assessed as part of ongoing Habitat Impact Assessments (above) and reported to the Group where collaborative action may be required in future management [Annual meetings]
4	Contribute to the Scottish Government woodland expansion target of 25% woodland cover.	The South West Ross DMG area currently supports 4373.17 ha of native woodland and 2243.6 hectares of commercial forestry. 178 hectares of native woodland have been established within the last five years. Proposals tabled to date provide for a further increase in area of 124.6 hectares native woodland over the next 5 years	Future proposals for new woodland creation to be discussed within the group in order to appreciate possible impact of new fencing on deer distribution and movements and also to assess what collaborative management may be required to undertake compensatory culls or address developing impacts

5	Monitor and manage deer impacts in the wider countryside (not improved agricultural land)	Regular Herbivore Impact Assessments have not in the past been carried out within the area except where the condition of designated sites has been undertaken by SNH as part of routine Site Condition Monitoring. Some estates have undertaken their own assessments of browsing impacts within native woodland schemes. The Group as a whole will encourage individual estates to initiate a regular programme of HIA on representative open hill communities across the area in the future (and as part of this Plan) and will seek to provide necessary training in monitoring methods.	Member estates to be encouraged to initiate regular programme of monitoring of herbivore impacts in woodlands and on open hill habitats. Results of assessments to be discussed at annual Group meetings and implications considered for any necessary changes to management [Annual]
6	Maintain Scotland's Carbon storage capability and contribute to securing future carbon storage potential	The extent of existing woodland cover is detailed at (4) above) and current proposals already expect to increase this by 124.6 hectares overall. Peatlands and areas of open heathland (assessed by Land Cover Scotland at 45107 ha) also contribute significantly to carbon storage/sequestration; lack of artificial drainage of these soils further highlights their value and importance. The Group is committed to maintaining such areas in good condition with ongoing deer management to ensure that impacts do not exceed moderate levels	In addition to woodland creation already proposed within this plan a number of estates are actively considering further woodland creation. It is noted that that there may be opportunities for reprofiling and revegetating areas of hagged peat on some of the higher ground to retore this to better condition. The Group will consider such opportunities further to enhance peatland erosion areas and will explore suitable funding sources opportunities.
7	Reduce or mitigate the risk of establishment of invasive non-native species	The Group has a policy for culling of sika when encountered within the area; muntjac are not currently recorded but any sightings in the future will be reported to SNH. The status of the former population of feral goats in unknown, but will be kept under review. Many Estates are also actively involved in programmes of eradication of invasive plant species such as <i>Rhododendron ponticum</i>	Group to collate reports of invasive species of deer at annual meetings. Group also to maintain records of ongoing programmes of rhododendron eradication or other clearance of non-native vegetation. [Annual]
8	Protect landscapes and historic features from deer and deer management activity.	The Group will consult a local archaeologist to identify sites and prepare a register of known sites; this will be circulated to all members.	To be actioned. The group will also review sites already mapped on http://her.highland.gov.uk/Map.aspx?clear=true

		At a wider landscape level, any fencing proposals will be risk-assessed against potential impacts (as in the Joint Agency Agreement on Fencing) with appropriate mitigation put in place where potential impacts are identified	All fencing proposals will be brought to the Group for discussion of potential impacts on deer distribution and movement patterns and any necessary compensatory action discussed
9	Contribute to delivering higher standards of competence in deer management	SWRDMG maintains a register of current skills and qualification of full-time and part-time staff employed in deer management. The Group as a whole has a commitment to ensure that all full-time staff shall in due course be qualified to DSC2. The Group is committed to offering ongoing training in other areas (e.g. in habitat impact assessment)	As above, Group to encourage all owners and staff to seek suitable qualifications and to update records of DMQ qualified staff at annual meetings. Annual meetings also to discuss new training needs which may be identified and seek opportunities for delivery of training required
10	Identify and promote opportunities contributing to public health and well-being benefits	Deer-vehicle collisions are few and very localised; in such areas roadside fencing will be reviewed/ replaced. If DVCs are perceived as an issue in the future DMG will act as a forum to identify and assist in the delivery of appropriate actions and SNH/ Transport Scotland/Local Authority will be involved as required. The Group aims to increase awareness of Lyme disease and other tick-borne diseases amongst stalking staff and guests/ visitors In production of venison for human consumption, the Group is committed to promoting Trained Hunter status and encouraging those handling carcasses to obtain e.g. Lantra Certificate in Wild Game Meat Hygiene. Estates are to be encouraged to register as approved outlets under the Scottish Quality Assurance Scheme for Venison Production	The Group will collate data on DVCs reported within the Management Area and upload these to the National DVC database annually. They will also seek annual updates from SNH on the distribution and extents of DVCs within the Management Area, other than those noted by members. Group to advise SNH of any issues identified and discuss appropriate action Group to encourage all those handling venison for consumption to secure Trained Hunter status and to review this as part of the regular annual assessment of training and qualifications (above: 1, 9)

11	Optimise economic benefits of Deer Management in Scotland	The DMG has established an initiative to collect and collate information from individual estates on economic costs and benefits of deer and deer management (see paragraph D1.25) although summary statistics only will be released more publicly. The Group also seeks to minimise ecological costs of deer impacts on habitats and wider biodiversity – and the associated economic costs of necessary mitigation	Group to establish a mechanism for collating and interpreting data available on economic costs and benefits of deer and their management
12	Minimise the economic cost of deer		
13	Ensure effective communication on deer management issues	The SWRDMG holds regular meetings which are in general well-attended by members. These meetings offer a forum for regular exchange of information on counts and culls and other routine monitoring information. Members are fully committed to attendance at such meetings or where unable to attend, to send representatives. The Group will consider establishing its own website linked to the website of the ADMG. This deer plan will be uploaded to that site together with minutes of regular meetings of the DMG and a brief Annual Report of activities carried out in the preceding period.	The SWRDMG holds regular meetings which are in general well-attended by members. Members are fully committed to attendance at such meetings or where unable to attend, to send representatives. Representatives are also invited from other local stakeholders or community Groups where appropriate. The Group will consider establishing its own website linked to the website of the ADMG. This deer plan will be uploaded to that site together with minutes of regular meetings of the DMG and a brief Annual Report of activities carried out in the preceding period.
14	Ensure deer welfare is taken fully into account at individual animal and population level	Data on annual recruitment rates (from end of winter counts) as well as data on winter mortality are gathered by most Estates; SWRDMG and individual Estates also consider carefully the implications on access to cover/shelter when reviewing proposals for new fencing or in the context of phasing of felling or enclosure for restocking within individual Estates' LTFP. On other welfare issues (e.g. during culling operations) The Group is committed to guidance offered by BPG	Member Estates to report demographic information to annual meetings and also report estimated levels of winter mortality; The Group should also assess formally the implications of any new woodland felling/restocking proposals (and any fencing associated with restocking or woodland creation) in terms of future availability of cover/shelter to local deer populations

AUDIT:

To assist in assessment of the success and delivery of this Plan, individual members shall be asked to complete an annual audit of actions undertaken on individual properties againsts targets set in section C of this Plan. A proforma template is provided in Appendix Three. Example sheets should be tailored to each individual property in relation to actions to which they have committed in Section C (cull targets, population targets, other management measures committed) and actions undertaken entered each year by comparison to targets set. Completed forms should be submitted to the Group Secretary before each annual meeting.

In relation to Group commitments made in section D, it is suggested that a regular part of the Agenda of each AGM should be to go through each of the Action Points listed in the table on pages 87-90 [final column] in relation to each of the 14 defined Public Benefits sought, and actions taken against each of those 14 named points should be individually and formally minuted. The Group should also undertake to update the database of skills and assess future training requirements of all involved in deer management.

Appendix One

South West Ross Deer Management Group Constitution

Appendix Two

Summary of Woodland Resources within the South West Ross Management Area

Name of Estate	Total Area of Native Woodland on property (ha)	Total Area of Native woodland (ha) established by 2008	Total Area of Native woodland (ha) established by 2014	Total Area of new Native woodland (ha) proposed 2015-2020
Achnashellach Estate [North]	18.5 [Balnacra]	18.5	18.5	0
Ardoch	30	0	0	
South Applecross	258	120	258	76 Allt Beag
North Applecross	1089.6	1089.6	1089.6	
Ben Shieldaig	301.8	301.8	301.8	Under consideration
Ben Damph	250	250	250	Under consideration
Carronach	0	0	0	0
Couldoran	10	10	10	0
Coulin	770.7	770.7	770.7	48.6
Fionnaraich	5.33	5.33	5.33	0
Glen Mhor	240	200	240	0
Kinloch	488	488	488	Under consideration
Kinlochdamph	c. 300	c. 300	c. 300	0
Kirkton	0	0	0	0
Ledgowan [North]	35	35	35	Under consideration
Lochcarron	439	439	439	
New Kelso	41.2	41.2	41.2	0
North Strome				
Tullich	72.03	72.03	72.03	0
FCS North Achnashellach	24	24	24	
TOTAL	4373.17	4195.17	4373.17	124.6

Name of Estate	Total Area of Commercial Forestry on property (ha)	Total Area of Commercial Forestry (ha) by 2008	Total Area of Commercial Forestry (ha) by 2014	Total Area of new Forestry (ha) proposed 2015-2020
Achnashellach Estate [North]	0	0	0	0
Ardoch	50	50	50	0
South Applecross	381	375	381	
North Applecross	93	93	93	
Ben Shieldaig	0	0	0	0
Ben Damph	0	0	0	0
Carronach	109	109	109	0
Couldoran	0	0	0	0
Coulin	443.6	443.6	443.6	
Fionnaraich	0	0	0	0
Glen Mhor	0	0	0	0
Kinloch	0	0	0	0
Kinlochdamph	0	0	0	0
Kirkton	86	86	86	0
Ledgowan [North]	25	25	25	
Lochcarron	42	42	42	
Lochcarron_Lady Wood	266	266	266	0
New Kelso	13.0	13.0	13.0	0
North Strome	235	235	235	
Tullich	0	0	0	
FCS North Achnashellach	500	500	500	0
TOTAL	2243.6	2243.6	2243.6	

Appendix Three: Example of annual audit sheet for completion by individual Estates and return annually to the SWRDMG. Sheets should be tailored to each individual property in relation to actions committed (cull targets, population targets, other management measures committed) and actions undertaken entered each year by comparison to targets set.

Action Points : Sample Audit sheet for Commitments Summarised in Section C of this Plan

		2014/15		2015/16		2016/17		2017/18		2018/19	
CULL		target	actual	target	Actual	target	actual	target	Actual	target	actual
	Stags	10-12		10-12		10-12		?		?	
	Hinds	15-20		?		?		?		?	
	Calves										
COUNT	Ground Count	yes		Yes		yes		Yes		yes	
	Numbers S: H: C	S:	H: C:	S: H: C:		S: H: C:		S: H: C:		S: H: C:	
	Heli-Copter										
	Numbers S: H: C										
Target Population	Stags	up to 70		up to 70		up to 70		up to 70		up to 70	
	Hinds	[e.g.] 140-150		140-150		140-150		140-150		140-150	
OPEN HILL VEGETATION MANAGEMENT											
	Areas Burnt										
	Bracken sprayed										
	Conservation Measures										

TRAINING	INFRASTRUCTURE [e.g. Argo tracks and maintenance] list actions	HABITAT IMPACT ASSESSMENTS	WOODLAND MANAGEMENT				
			Native Creation/Restoration	Commercial Forestry Activity			

Other Notes:

Maps

1. Property Boundaries
2. Land Cover Scotland
3. National Forest Inventory Woodlands
4. Woodland Creation Schemes
5. Designated Sites
6. SSSI Condition
7. Native Woodland Survey of Scotland – Herbivore Pressure
8. Deer Vehicle Collision (DVC) Reported Locations