

B5 THE NEW FOREST HEATHLANDS

Restoring and sustaining the area's unique mosaic of heathland habitat to conserve nature and commoning into the future.

1. INTRODUCTION & BACKGROUND

1.1 Introduction

Heathland and grassland covers around 12,306 hectares of the New Forest Crown Land and accounts for around 46% of the area managed by the Forestry Commission¹ in this part of the District. Heathland is found both on the Open Forest² and within restored areas of Inclosures. The term heathland covers a variety of vegetation/habitat types including:

- ◆ Dry Heath – 714 ha
- ◆ Bracken – 803 ha
- ◆ Gorse – 347 ha
- ◆ Humid Heath – 4,498 ha
- ◆ Wet Heath – 1692 ha
- ◆ Valley Mire – 1444 ha
- ◆ Wet Lawn – 911 ha
- ◆ Lowland Acid Grassland – 1864 ha
- ◆ Partially Improved Grassland – 12 ha
- ◆ Ponds – 21 ha

The distribution of these habitat types across the Crown Lands is shown in [Map B5.1](#) and [Figure 5.1](#).

Grazing by horses and cattle is an integral part of New Forest heathland management. The heathland, mires and grasslands have been grazed by commoning stock for centuries, which has led to the unique landscape and habitats so characteristic of the Open Forest. Indeed many of the traditional heathland management techniques which have been practised through the ages are still applied today.

1.2 Progress in Heathland Management

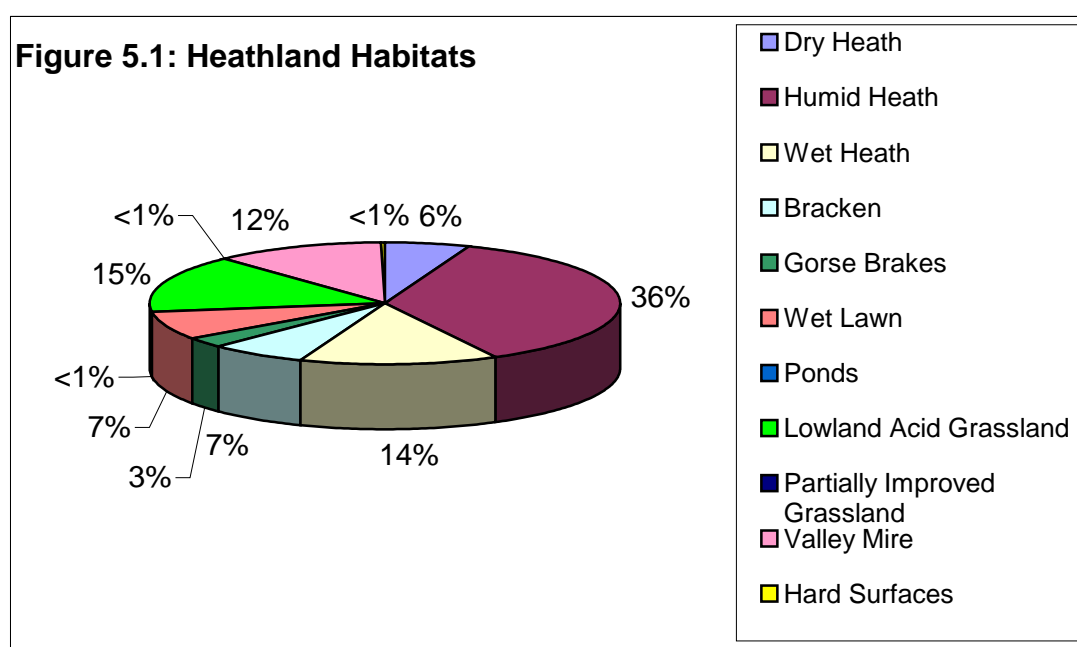
In the last 10 years heathland management and restoration has progressed significantly due to funding from the New Forest Life 2 project (1997-2001) and New Forest Life 3 Project (2002-2006).

¹ The Forestry Commission has legal title to manage 26756.06 hectares of land the majority of which lies within the New Forest Perambulation (NB This figure does not include FC management of small lanes/verges around Marchwood and Sway).

² Open Forest refers to the Crown Lands which lie outside Inclosures and includes both Heathland and Ancient & Ornamental Woodland

LIFE 2 enabled tremendous progress to be made in addressing a backlog of rotational vegetation maintenance and in introducing new programmes for heathland restoration. Indeed the project enabled restoration work to commence on some 4,000 hectares of heathland habitats within the Crown Lands that were in unfavourable condition. The LIFE 2 project also established an Open Forest management system and an agreed approach to habitat monitoring which now steer current and future heathland management. The system also monitors performance in delivering condition assessment targets.

LIFE 3 concentrated on the restoration of a variety of wetland habitats. In terms of heathland and grassland habitats it achieved the restoration of 183 ha of valley mire, 141 ha of wet grassland, 26 ha of wet heath and 9 ha of dry heath (Figure B5.2). A 10 year 'New Forest Wetland Management Plan (2006-2016)' was also produced which highlights further areas requiring restoration and outlines tried and tested restoration techniques and case studies based on Life 3 restoration sites.



Source: New Forest Vegetation Map (updated 2007)

1.3 Management of Heathland Operations & Work Programmes

To make management more efficient and effective, the New Forest heathlands are divided up into 10 management units (Map B5.3). Work programmes are devised for each management unit annually. The seasonal work timetable is shown in Table B5-1. Much of the current work is focused around the condition of SSSI condition units and the requirements of the New Forest Act 1949 to keep the open Forest 'sufficiently free of coarse herbage, scrub and self-sown trees'.

A computer based GIS Open Forest Management System has been set in place during the last plan period and as the quality and quantity of data recorded on the system improves, it is becoming possible to forecast future heathland management needs over periods of years rather than months. The Open Forest management system also allows the Forestry Commission to better predict what resources are required and integrate annual work programmes in given areas.

In order to increase environmental protection while carrying out work on heathland habitats, Open Forest Operational Site Assessments (OSAs) have recently been implemented, using a similar system to Inclosure OSAs (refer to B3 – Section 1.4). OSAs are detailed site plans, drawn up for each Management Unit prior to work taking place. They are a key tool in delivering the objectives of both the Forest Design Plan and Open Forest work programmes. The OSA contains details of site features relating to archaeology, conservation, utilities and public access. It provides an essential link between the broad objectives of heathland and habitat management and the detailed practical issues and sensitivities relevant to operational delivery and implementation on the ground. An operations map bringing together all the practical issues relating to the heathland and the required works comprise an essential part of the OSA and copies of this document must be given to all staff and contractors involved in the delivery of work. Further guidance on preparing OSAs can be found in Part D.

Table B5-1: Heathland Seasonal Work Programme

Work Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Maintenance of Favourable Habitat Condition												
Burning												
Cutting												
Clearance of exotics & undesirable native species												
Spraying of herbicides												
Bracken spraying												
Bracken forage harvesting												
Bracken Swiping												
Ragwort Pulling												
Lawn maintenance												
Mire Maintenance												
Passageway maintenance												
Roadside cutting												
Restoration of Favourable Habitat Condition												
Habitat restoration within Inclosures												
Clearance of exotic species												
Scots Pine clearance												
Birch and scrub clearance												
Lawn restoration												
Mire Restoration												
Survey & Monitoring												

1.4 Heathland Habitat Characteristics

Mires

The New Forest mires cover an area of around 1444 hectares of the Crown Lands and occur as either seepage step mires or valley mires. They support a suite of communities including Valley Bogs, Bog Pools, Soakways, Poor Fen, Moorgrass Mires, Marl Flushes and Transition Mires. Although some areas have been damaged by drainage, most of the New Forest mire systems are still largely intact, and its extensive cover and transitions to other heathland communities is unparalleled in the UK. It is unlikely that such a variation in mire communities over such an extent in an intimate mosaic with other heathland exists in comparable form anywhere else in the Atlantic zone.

Valley mires can be found in the valley bottoms where low hydraulic gradients and impermeable subsoils prevail. Wide, shallow valleys can support extensive mires while the steeper valleys tend to support smaller more localised mires. Mires are characteristically acidic with a low nutrient status. However, in the Forest, the underlying geology strongly influences the water chemistry and nutrient status which are important in determining the distribution of different mire communities. The central flows of valley mires which receive water from the Headon Beds may be neutral or slightly alkaline, while those fed from sand and gravels are acidic. The mires become increasingly acidic and nutrient poor with distance from the central flow with communities changing from enriched fen and carr to Sphagnum bog towards the periphery.

Valley Bogs

Valley bogs are the most extensive form of mire community found in the Forest and occur both in valleys and seepage steps. The community is characteristic of NVC type M21a – Bog Asphodel-Bog Moss Valley Mire – White Beak-sedge Bog Moss sub-community. *Sphagnum papillosum* is dominant while other sphagnum moss species, for example *Sphagnum subnitens*, *S. auriculatum*, *S. capillifolium* and *S. recurvum* are frequent. Other common species include Common Sundew (*Drosera rotundiflora*), Cross-leaved Heath (*Erica tetralix*), Bogbean (*Menyanthes trifoliata*), Perfoliate Pondweed (*Potamogeton polygonifolius*) and Bog Myrtle (*Myrica gale*) as well as a significant proportion of the British population of Bog Orchid (*Hammarbya paludosa*). The bryophyte flora is especially rich featuring many bog specialist liverworts.

Bog pools

Many of the larger mires support bog pools where low flows or stagnant water result in high acidity and very low nutrient levels. Carpets of Sphagnum moss are scattered with vascular plants such as Bog Bean (*Menyanthes trifoliata*), White beak-sedge (*Rhynchospora alba*) and Common Cotton Grass (*Eriophorum angustifolium*). Local species include Lesser Bladderwort (*Utricularia minor*), Great Sundew (*Drosera anglica*), Brown Beak-sedge (*Rhynchospora fusca*) and Bog Sedge (*Carex limosa*). Bog pools are one of the few communities that do not rely on grazing for their survival.

Soakways

Soakway communities are associated with the natural drainage systems of pristine mires. The community is typified by NVC type M29 – Marsh St John's Wort – Bog pond weed soakway. Linear creeping mats of Marsh St John's Wort (*Hypericum elodes*) and Perfoliate Pondweed (*Potamogeton polygonifolius*) are highly distinctive and are often

accompanied by Lesser Spearwort (*Ranunculus flammula*) and Bulbous Rush (*Juncus bulbosus*). A range of other bog or poor fen plants can be found including *Sphagnum auriculatum*, Marsh Pennywort *Hydrocotyle vulgaris*, Bog Pimpernel (*Anagallis tenella*), Common Sundew (*Drosera rotundifolia*), Bog Aspidel (*Narthecium ossifragum*), Bottle Sedge (*Carex rostrata*), Lesser Water Plantain (*Baldellia ranunculoides*), Marsh Lousewort (*Pedicularis palustris*) and Marsh Bedstraw (*Galium palustre*). The diversity of species is dependent upon the degree of grazing and poaching and whether the soakway is permanently or seasonally wet.

Poor fen

Poor fen communities are composed of species which are tolerant of a higher nutrient status than the valley bog communities. The soils are consistently waterlogged and acidic with modest water flow. Poor fens are usually well grazed and provide commoners' stock with an early spring bite and essential grazing during times of drought. Like other mires, areas of poor fen have also been damaged by drainage.

The poor fen community is typified by M6di Star sedge-Bog moss mire-sharp flowered rush sub-community. *Sphagnum recurvum* is the dominant species while Sharp flowered rush (*Juncus acutiflorus*) is constant but controlled by grazing. Typical poor fen associates include Velvet Bent (*Agrostis canina*), Star Sedge (*Carex echinata*), Marsh Willow Herb (*Epilobium palustre*) and the mosses *Sphagnum palustre* and *Polytrichum commune*. In the New Forest, poor fens often host Marsh Violet (*Viola palustre*) and White Sedge (*Carex curta*).

Purple Moor-grass mires

Purple moor-grass mires have a high level of water movement. Low grazing levels produce ideal conditions for rapid Purple moor-grass (*Molinia caerulea*) growth and dominance. This species together with Bog Myrtle (*Myrica gale*) effectively suppress other less competitive species producing a rather floristically impoverished community. Other species include Sharp flowered rush (*Juncus acutiflorus*), Tormentil (*Potentilla erecta*) and Cross-Leaved Heath (*Erica tetralix*). In terms of NVC the community is representative of M25a: Purple moor-grass-Tormentil mire-Cross-leaved heath sub community.

Marl Flushes

The most striking Marl Flushes are found in seepage step mires on marl (lime rich clay) where the water is base rich (pH7.0 or higher) and allows tuffa to be deposited on mosses. However not all marl flushes are base rich enough to allow tuffa deposition. Stoney Moors provides a good example of a Marl Flush. In the New Forest, Marl Flushes are typified by the following communities:

Eleocharis quinquefolia-*Drepanocladus revolvens* mire which is a lowland form of NVC community M10a: *Carex dioica*-*Pinguicula vulgaris* mire-*Carex viridula* oedocarpa-*Juncus bulbosus* sub-community

Highly lime rich Marl Flushes (pH 7.0 or higher), depositing tuffa, with lime loving species prominent. The presence of Few Flowered Spike Rush (*Eleocharis quinquefolia*), the brown moss (*Cratoneuron commutatum*) and the abundance of the brown moss *Drepanocladus revolvens* are diagnostic. Associated species include Carnation Sedge (*Carex panacea*), Tawny Sedge (*Carex hostaina*), Bog Pimpernel (*Anagallis tenella*), Devils Bit Scabious (*Succisa pratensis*) and Lousewort (*Pedicularis sylvatica*), Lesser Skullcap (*Scutellaria minor*) and Quaking Grass (*Briza media*). Purple moor grass

(*Molinia*) is held in check by tight grazing. These marl flushes support a very rich flora including notable species such as Broad-leaved Cotton Grass (*Eriophorum latifolium*), Common Butterwort (*Pinguicula vulgaris*) and the bryophytes *Cratoneuron commutatum*, *Philonotis calcarea* and *Preissia quadrata*.

Eleocharis spp-Campylium stallatum mire-Narthecium ossifragum-Drosera rotundifolia
sub-community which incorporates NVC Community M14 *Schoenus nigricans-Narthecium*
ossifragum mire

This community is found in less enriched Mire Flushes (pH 6-6.5) which does not result in the deposition of tuffa. The only abundant moss is *Campylium stellatum*. Species characteristic of more acidic mires are evident including Bog Asphodel (*Narthecium ossifragum*) and Common Sundew (*Drosera rotundifolia*). Associated species include Sharp-flowered rush (*Juncus acutiflorus*), Carnation Sedge (*Carex panacea*) and Cross-Leaved Heath (*Erica tetralix*).

Transition Mires

Transition Mires occur on deep, waterlogged peat which are irrigated by base-rich water producing very wet swampy condition. They support brown mosses and tall sedges but Black Bog-rush (*Schoenus nigricans*) is never present. Transition mires are particularly notable for the rare species which they support including Slender Cotton Grass (*Eriophorum gracile*), Bog Sedge (*Carex limosa*), Slender Sedge (*C. lasiocarpa*), *Sphagnum contortum*, *S. teres*, *S. subsecundum*, Marsh Lousewort (*Pedicularis palustris*), Great Sundew (*Drosera anglica*), Lesser Bladderwort (*Utricularia minor*), *Preissia quadrata*, *Calliergon giganteum* and *Philonotis calcarea*. The communities are generally typified by NVC M9: *Carex rostrata-Calliergon cuspidatum/giganteum* mire, although a number of different stand types can be identified³

Mires and their importance for breeding waders

The New Forest mires (together with other New Forest open wetland habitats) are extremely important for breeding waders including snipe, curlew and redshank. The snipe population represents nearly 6% of the English population, the curlew population represents 15% of the southern England regional population and redshank 1.5% of southern England numbers, the majority of which breed at the coast. In addition the number of breeding lapwings are likely to be of regional significance.

The 2004 New Forest Breeding Waders Survey funded by Life 3 which repeated a similar survey conducted ten years previously (Tubbs & Tubbs, 1994), confirmed that mires in particular remain extremely important for breeding snipe, curlews and redshanks, although their numbers have been reduced by 29%, 25% and 22-26% respectively. The number of breeding lapwing pairs have increased by 34-39%.

Wet grassland

The New Forest represents one of the best areas in the UK for wet grassland. Wet grassland communities are of international importance for nature conservation and it is possible that the UK contains more of this habitat than survives in the rest of Europe, with the possible exception of the Republic of Ireland.

³ For full description of community stand types refer to the New Forest SAC Management Plan

New Forest Wet grassland (or wet lawn) covers around 911 hectares of the Crown Lands most of which is found along the non-wooded parts of floodplains. Flushed lawns are a characteristic feature of valley slopes and pasture woodland glades across the Forest. They comprise a suite of plant communities confined to impermeable or slowly impermeable clays, or permeable soils affected by high ground water levels. The lawns tend to be waterlogged in winter but dry out to some extent in summer.

The community types and distribution are strongly influenced by stocking regimes, soil moisture retention and soil fertility. Generally the swards are tightly grazed (<2cm) and are characterised by the presence of Velvet Bent (*Agrostis canina*) and sedges such as Carnation Sedge (*Carex panacea*), Common Sedge (*C. nigra*) and Common Yellow Sedge (*C. viridula oedocarpa*), along with species typical of wet grassland such as *Molinia caerulea*, Devil's Bit Scabious (*Succisa pratensis*), Creeping Willow (*Salix repens*) and Marsh Thistle (*Cirsium dissectum*). Extensive carpets of Bog Pimpernel (*Anagallis tenella*) are seasonally prominent. Where soil water retention is highest or around flushes Marsh Pennywort (*Hydrocotyle vulgaris*), *Juncus acutiflorus* and Marsh St. John's Wort (*Hypericum elodes*) are abundant. The more acidic sites support Sphagnum lawns and an increasing heathland element typified by Cross-Leaved Heath (*Erica tetralix*).

Wet Heath

Wet heath communities cover 1,692 hectares of the New Forest Crown Lands. Wet heath occurs on nutrient poor mineral soils or very shallow peats that are at least seasonally waterlogged but may be dry on the surface in summer. The vegetation communities are strongly influenced by burning and grazing. Stands which are managed by burning and grazing have the highest biodiversity. The vegetation communities are typified by NVC communities M16a, M16b and M16c.

M16a: Cross-leaved Heath – Sphagnum compactum wet heath-typical sub-community

This community is the most extensive and accounts for nearly 50% of wet heath cover. It is generally found on the poorer soils in the northern half of the Forest and is characterised by the presence of Heather (*Calluna vulgaris*), Cross leaved Heath (*Erica tetralix*) and Purple Moor Grass (*Molinia caerulea*) although the degree of dominance depends upon water levels and management regime. *Sphagnum compactum* is the dominant moss species. Lichens particularly the wet heath varieties such as *Cladonia strepilis* and *Pycnothelia papillosum* can be frequent. Typical vascular plants include Deer-grass *Trichophorum cespitosum* and Heath Rush (*Juncus squarrosus*).

M16b: Cross-leaved heath-Sphagnum compactum wet heath-Devil's bit Scabious-Carnation Sedge sub-community

This community accounts for 40% of wet heath. It is more tussocky in nature due to the steady movement of surface water and tends to be much more herb rich than M16a due to the richer underlying soils. A rich herb community can usually be found between the *Molinia* tussocks including such species as Tormentil (*Potentilla erecta*), Devilsbit Scabious (*Succisa pratensis*), Heath Milkwort (*Polygala serpyllifolia*), Carnation Sedge (*Carex panacea*), Meadow Thistle (*Cirsium dissectum*) and Sawwort (*Serratula tinctoria*). Other notably species include Petty Whin (*Genista anglica*), Sneezewort (*Achillea ptarmica*) and Creeping Willow (*Salix repens*) and the nationally scarce Marsh Gentian (*Gentiana pneumonanthe*).

M16c: Cross-leaved Heath – Sphagnum compactum wet heath-White beak-sedge-Oblong-leaved Sundew sub-community

This heathland community type accounts for the remaining 10% of New Forest wet heaths. It is characterised by a reduced cover of Heather (*Calluna vulgaris*), Cross-leaved Heath (*Erica tetralix*), Purple Moor Grass (*Molinia caerulea*) and an extensive cover of mosses including *Sphagnum compactum* and *Sphagnum tenellum*. Vascular plants include Deer-grass (*Trichophorum cespitosum*) and Heath Rush (*Juncus squarrosus*). Wetter hollows and runnels support Common Sundew (*Drosera rotundifolia*) and the rarer Oblong-leaved Sundew (*Drosera intermedia*) which is a particularly distinctive feature of this community. Bare peat tends to be colonised by the local *Rhynchospora fusca* and the club moss *Lycopodiella*.

4.3.2.8 Dry Heath

The New Forest dry heath communities comprise a structural mosaic of ericaceous vegetation with at least 10% young Heather *Calluna vulgaris* and between 20-50% maturing or old heather. Total cover of Heather is usually between 25-90%. Two main NVC communities can be found:

- ◆ H2 Heather-Dwarf Gorse Heath (*Calluna vulgaris* – *Ulex minor*)
- ◆ H3 Dwarf Gorse- Bristle Bent Heath (*Ulex minor*-*Agrostis curtsii*)

H3 differs from H2 by the presence of Bristle Bent possible due to higher levels of nutrients. In addition a further six sub community types can be found due to differing levels of soil moisture content and nutrient status through to those too wet to support Purple heather (*Erica cinerea*) but not wet enough to support *Sphagnum* and wet heath communities described above. Other species typical of dry heath include Cross-leaved heath (*Erica tetralix*) and Purple Moor grass (*Molinia caerulea*), Bracken (*Pteridium aquilinum*) and Gorse (*Ulex europaeus*).

Heathland management through burning and grazing is essential to support dry heath communities. Pine, rhododendron and bracken control are also important activities. Dry heaths are also harvested to make the heather bales used for drain infill and sediment traps.

4.3.2.9 Temporary & Permanent Ponds

Temporary ponds (sometimes referred to as ephemeral ponds) are scattered throughout the New Forest and are typified by small water-filled depressions on poorly drained soils which dry out temporarily during the summer months and occasionally during very dry winters. These areas can support a unique assemblage of plants and invertebrates. Sanderson (1999) classified the communities of temporary ponds into five types:

- ◆ Spike-rush-Purple moor-grass community
- ◆ Lesser marshwort-Floating club-rush
- ◆ Creeping bent-Marsh foxtail- Knotweed community
- ◆ Floating sweet-grass community
- ◆ Pool edge assemblages

The communities of Permanent Ponds are complex but vary according to the water chemistry and have not been fully investigated or classified. Nutrient poor-acid/neutral

ponds are often dominated by Shore-weed (*Litterellion uniflorae*) communities while richer acid/neutral ponds often have Common water-crowfoot (*Ranunculus peltatus*) as a dominant species. Further details of communities and individual species can be found in Sections 1.3.19 & 1.3.20 of the SAC Management Plan.

1.5 Grazing

The Forestry Commission has no control over grazing on the Open Forest. Grazing takes place on the heathlands and grasslands of the Crown Lands through Common Rights. Commoning is an ancient tradition which can be traced back to at least Saxon times. Rights of Common are attached to land or property and are conferred by its ownership or occupation. There are no limits to the numbers of stock attached to a property carrying commoning rights and it is a combination of market forces and available grazing which determines stocking levels. Indeed financial returns tend to be limited and it is tradition and 'a way of life' that has sustained commoning to date. There are currently around 470 practising commoners, although at least 1300 properties have commoning rights.

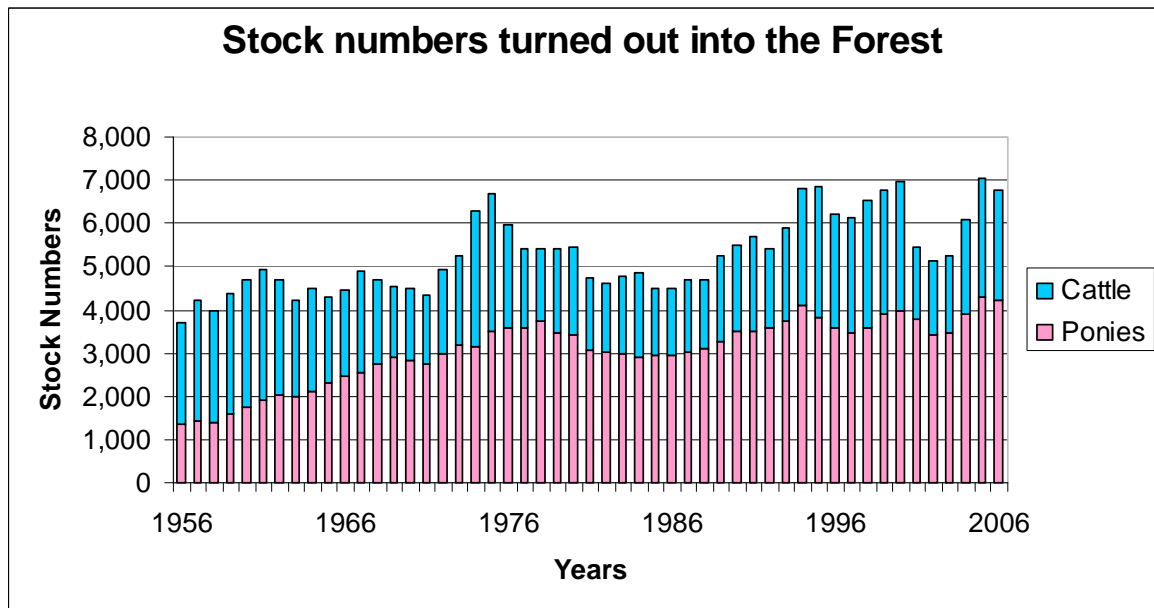
The management of Commoning is the responsibility of the Verderers Court. The Verderers comprise 5 elected and 5 appointed Verderers whose role it is to regulate the Rights of Common and development on the Open Forest. Their role is guided by the New Forest Acts and byelaws. The requirement to receive the consent of the Verderers is generally restricted to activities in the Open Forest and the Forestry Commission has a duty to consult and gain agreement with the Verderers in relation to activities or proposed developments on the Open Forest ([refer to Section B1.2](#)).

The Verderers are assisted by 5 Agisters who oversee commoning activities across the whole of the Forest. Each Agister has his own geographical area of responsibility in which he oversees animal welfare, drifting and marking activities. The drifts are an important occasion when all the livestock on the Forest are rounded up. This allows branding of new foals, marking (the tail is trimmed to a particular pattern to indicate which area/Agister is assigned to) and removal of any animals that commoners want to sell or return to their holding. Checks can also be made that animals are legally depastured and 'marking fees' paid where appropriate.

As well as the Crown Lands stock can graze freely on the Adjacent Commons. The Adjacent Commons are areas of common land, contiguous with or near the New Forest. They fall under the doctrine of right of vicinage, which states that where two commons adjoin, stock, which may be depastured by right on one common, may wander freely between both. Therefore animals depastured on the Adjacent Commons can wander freely onto Crown Land.

Stock depastured on the Forest comprise ponies, cattle, donkeys and at certain times of the year pigs can be turned out under the "Right of Mast" to eat the acorns which are potentially toxic to horses and cattle. Ponies form the greatest proportion of stock on the Forest (Table B5-2). The large dip in stock numbers in 2001 was due to the Foot and Mouth Crisis.

Table B5-2: Stock Numbers



Source: Verderers of the New Forest (NB Stock numbers based on marking fees)

Commoning Rights

Rights	Definition
Common of pasture for commonable animals	Applies to ponies, cattle, donkeys, and mules. Applies to 65,000 acres of private enclosed land in and around the New Forest as calculated by the 1858 Register of Claims. Allows animals to graze freely on the Open Forest and certain Inclosures on Crown Lands and adjacent commons
Common of pasture for sheep	Confined to certain former monastic property in the S.E. of the Forest and to a few fields in the extreme NW. Right is not currently exercised.
Common of mast	Right to turn out pigs in the autumn to eat acorns. Mast season generally runs for 60 days.
Common of turbury and common of marl	No longer exercised
Estovers	Right to receive free firewood annually from the Forestry Commission. Less than 100 households benefit from this Right.

Grazing associated with Commoning has been essential in shaping and maintaining the landscape and habitats of the Open Forest through the seasonal variations in the preferences and grazing intensity of different plant communities. Both cattle and ponies are selective grazers and follow fairly regimented patterns. Cattle use their preferred habitat types throughout the year and have a heavy preference for lawns and improved grasslands with extensive use of heathland. They tend to graze wet heath in summer and

drier areas of heath in the winter. Feeding use of other communities is not extensive although deciduous woodland is exploited at times during the winter and acid grassland is used sporadically for most of the year. Cattle tend to spend less time actively feeding than ponies (60% compared to 75-88% for ponies) and restrict much of their feeding activity to daylight hours.

Ponies on the other hand exhibit a more marked seasonal and diurnal use of vegetation types. Improved grasslands and acid grassland are important throughout the year with streamside lawns being particularly favoured. Indeed the majority of ponies feed in discrete groups with each group having a favoured lawn which forms the focus of their grazing. However, wet heath, bogs and regenerating heathlands are used seasonally with peak use in the summer (May – September), which is related to *Molinia* growth which is the most important forage species in bogs and heathland. Feeding in gorse-brakes and deciduous woodland is largely restricted to winter, although woodlands are used for night feeding throughout the year. Ponies tend to move off the lawns and heath during the night to seek shelter among the trees where they continue to graze throughout the night.

Although both ponies and cattle feed on lawns each has its own preferred area on the lawn. Ponies rarely graze their own latrine areas leaving areas of longer sward which in turn are utilised by the cattle which prefer to graze a longer sward.

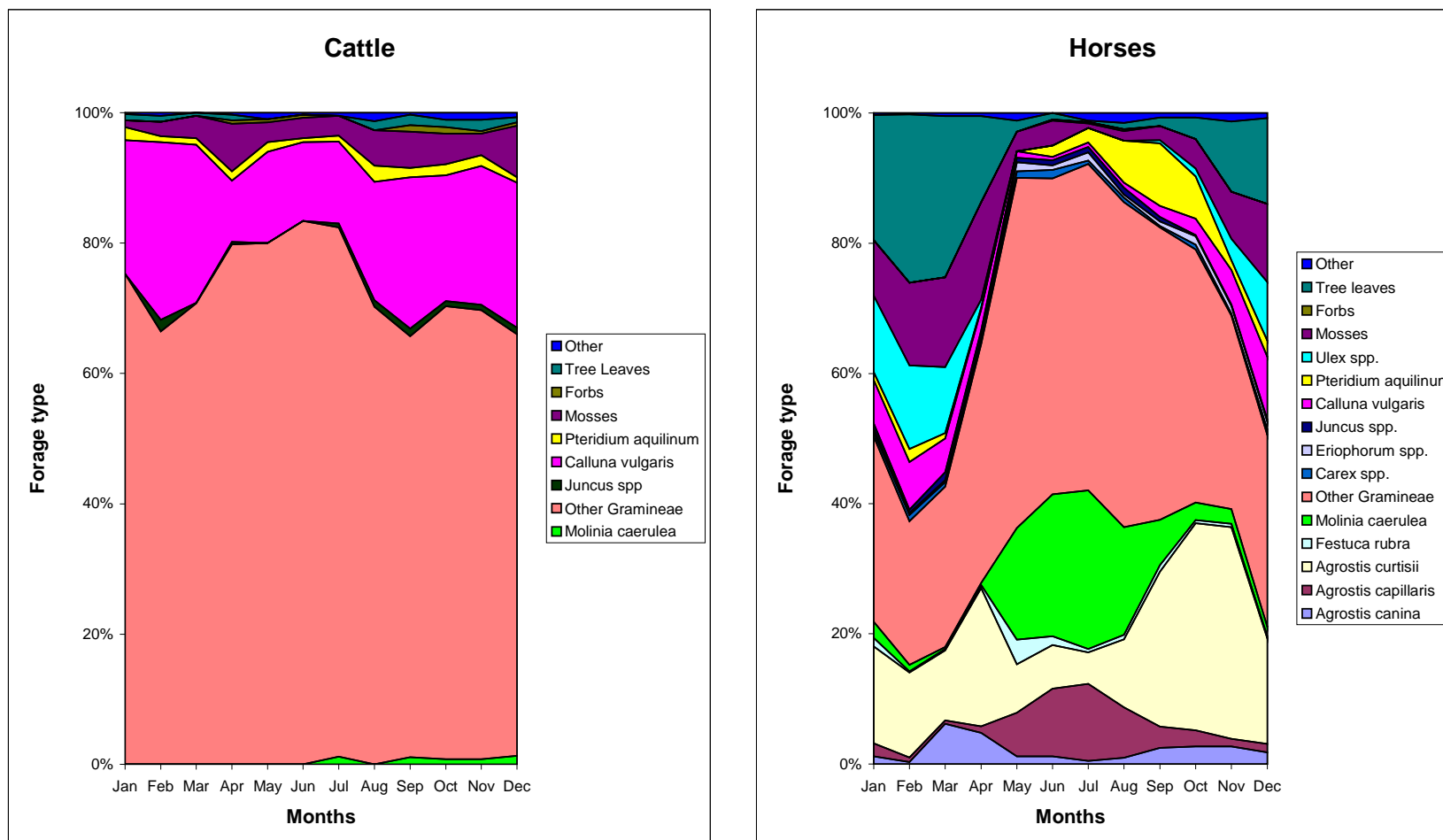
The feeding preferences of cattle and ponies for different plant species are shown in [Figure B5.2](#) while the productivity of different habitat types is shown in Table B5-1.

Table B5-1: Productivity and grazing pressure on different habitat types

Habitat Type	Growing Season Production (tons/acre)	Percentage removed by grazing
Reseeded lawns	0.90	94%
Commoners' improved grassland	1.31	86%
Streamside lawns	1.96	66%
Acid grassland	0.63	91%
Bog	1.84	89%
<i>Molinia</i> Heath	0.90	48%
<i>Molinia</i> Bog	0.90	48%
<i>Juncus</i> sp	4.89	72%
Bramble leaves	1.27	24%

Source: Putnam et al

Figure B5.2: Forage Preferences of Cattle and Horses



Source: R.J. Putman et al (1987)

Based upon the percentage species composition of cuticular fragments in the faeces of New Forest cattle & ponies

2. MANAGEMENT FRAMEWORK FOR THE HEATHLANDS

Heathland and Grassland Management is currently guided by the following key mechanisms:

- ◆ Ministers Mandate
- ◆ New Forest Act 1949
- ◆ Generic Prescriptions set out in the New Forest Special Area of Conservation Management Plan 2001 (commonly referred to as the SAC Management Plan)
- ◆ Forest Design Plans where areas within Inclosures are to be restored to heathland.
- ◆ Open Forest Advisory Committee (OFAC) which liaises with the Forestry Commission regarding management measures needed to protect livestock, public access and other cultural landscape and conservation issues

2.1 The Minister's Mandate

The Ministers Mandate sets out the priorities for management of the Crown Lands as highlighted in Part B1. However the mandate also sets out specific management obligations for the Open Forest.

The Ministers Mandate for the Open Forest (1999)

- The Open Forest will continue to be managed actively for the benefit of common grazing.
- A wide diversity of age, structure and distribution of vegetation will be sought and maintained for the protection of populations of nationally scarce wildlife in consultation with Natural England and other interested bodies.

2.2 New Forest Act 1949

Under Section 11 of the New Forest Act 1949, the Forestry Commission has the responsibility for managing the drainage of the forest including the maintenance of culverts and bridges and for ensuring that grazing is kept sufficiently free of coarse herbage, scrub and self sown trees. It is the remit of the Forestry Commission to decide what work is necessary, having due regard to amenity, but there is a requirement to consult the Verderers prior to making any decision. The Forestry Commission has no control over levels of grazing on the Open Forest.

2.3 New Forest Special Area of Conservation (SAC) Plan

The majority of the heathlands and associated habitats lie within the New Forest Special Areas of Conservation SAC, RAMSAR and New Forest Site of Special Scientific Interest (SSSI) ([Map B5.7](#)). The 'New Forest Special Area of Conservation

Management Plan' (SAC Plan) was published in 2001. This document outlines the principle aims of management for the New Forest heathland communities and provides a set of generic prescriptions and rationales detailing the form of management required. This Heathland & Grassland Plan is intended to form Part 4 of the SAC Plan, which demonstrates how management of the heathland communities will be implemented.

Hard copies of the SAC Plan are available in Queen's House or can be viewed electronically at www.newforestlife.org.uk/life2/managementplan.htm

SAC Plan principle aims for managing New Forest Heathland Communities

Where the objective is to maintain the unit in favourable condition, then the favoured management option will be one of continued extensive management, through a series of rotational maintenance operations conforming to the policies and prescriptions set out in part 3.6.2A of the SAC Plan

Where the objective is to restore units to favourable condition, then additional management operations may be required in the short-medium term, conforming to the policies and prescriptions set out under 3.6.2B of the SAC Plan.

2.4 Forest Design Plans

The New Forest Inclosures Forest Design Plan (FDP) sets out the long term strategic management of the Inclosures and encompasses relevant national strategy and policy (refer to [Part B3 New Forest Inclosures for further detail](#)). The New Forest Inclosure Plans include a number of transformations to heathland and Open Forest. These areas will transfer into the management of the Open Forest Team once restoration is complete (approximately 517 hectares between 2006 and 2021). The methods proposed for the transformation to heathland are outlined in [Part D](#).

3 MANAGEMENT OBJECTIVES, ISSUES & ACTIONS FOR THE NEW FOREST HEATHLANDS

Heathland Management Objectives

- 1. To maintain and restore heathland habitats in order to support and enhance the important nature conservation interest and landscape character of the open forest.**
- 2. To support the traditional depasturing of commoning stock through appropriate and targeted heathland management techniques and maintenance of access.**
- 3. To develop the economic returns from heathland by-products to help fund and sustain heathland management activities.**
- 4. To carry out targeted monitoring to inform heathland management decisions and to ensure that heathland management objectives are being achieved.**

3.1 Key Issues, Policies & Actions Required to Meet Heathland Management Objectives

Issue 1 Consultation & stakeholder involvement

Policy B5-1: The Forestry Commission will work closely with the Open Forest Advisory Committee, Natural England and other bodies as required to apply and deliver Management Plan objectives.

The Open Forest Advisory Committee (OFAC) provides an important mechanism through which the Forestry Commission can inform key stakeholders:

- ◆ about the work which the Forestry Commission has carried out on the Open Forest;
- ◆ present proposed future work programmes for detailed discussion;
- ◆ receive feedback on work carried out;
- ◆ receive advice from the Committee on any additional work that they feel needs to be carried out.

The type of works which are discussed through OFAC include:

- ◆ Cut & Burn Programme
- ◆ Roadside Cutting
- ◆ Forest Lawns
- ◆ Woodland (refer to A & O Plan)
- ◆ Drains Maintenance
- ◆ Passages, Forest tracks and other erosion works
- ◆ Pine & Birch clearance
- ◆ Bracken Management
- ◆ Holly Pollarding/Coppicing
- ◆ Inclosure restoration
- ◆ Valley Mires
- ◆ Control of exotics including Rhododendron

Open Forest Advisory Committee – Stakeholder Representation

- Commoners Defence Association
- Natural England
- Environment Agency
- Forestry Commission
- Hampshire Wildlife Trust
- Lyndhurst Parish Council
- New Forest Association
- RSPB
- Verderers
- Individuals with a key interest in the Open Forest

Site visits are carried out as required to clarify the detail of work at key sites.

Another important area of Open forest work is restoration of the New Forest SSSI. A number of SSSI units are in unfavourable condition due to past drainage and subsequent encroachment by scrub and pine. Close consultation is required with Natural England and other key stakeholders in progressing this work ([refer to Issue 2](#)).

Actions

- i. Seasonal management programmes will continue to be drawn-up through the workings of the Open Forest Advisory Committee. The programme will generally be delivered in accordance with the annual calendar for the management of the Open Forest set out in Table B5-1.*
- ii. Networking with other heathland managers to keep abreast of new research and developments.*

Issue 2 Protection & enhancement of New Forest SSSI

Policy B5-2: We will carry out our obligations as land managers under Section 28G of the Wildlife and Countryside Act 1981 to protect and enhance the New Forest Site of Special Scientific Interest (SSSI). Every effort will be made to achieve our PSA Target for Open Forest (Heathland) SSSI units by 2010.

The majority of heathland, which the Forest Commission manages, lies within the New Forest Site of Special Scientific Interest (SSSI) ([Map B5.4](#)). The Forestry Commission as land managers have an obligation under Section 28G of the Wildlife and Countryside Act 1981 to take reasonable steps to protect and enhance the SSSI. Under a Public Service Agreement (PSA), 95% of the New Forest is required to be in favourable or unfavourable recovering condition by 2010. However, not all Heathland SSSI units are currently in favourable or unfavourable recovering condition. A number of actions are required to maintain or improve the condition of these units as highlighted below.

Actions

- i. Continue to develop work programmes to restore Open Forest heathland SSSI units to favourable condition using appropriate techniques ([refer to Issue 3](#))*
- ii. Reference will be made to the New Forest Wetland Management Plan/Practitioners Guide to determine suitable techniques for carrying out wetland restoration, prioritise areas for restoration and identify issues that need to be considered as part of project planning.*
- iii. Ensure timely consultation and liaison with Natural England and other key stakeholders including the Verderers and CDA.*
- iv. Implementation of Open Forest Operational Sites Assessments (OSAs). ([Refer to guidance in Part D.](#))*
- v. Continue development of integrated GIS based open forest management system based upon SSSI condition assessment units to help deliver co-ordinated and targeted management programmes.*
- vi. Use findings of recent report on 'Channel erosion in New Forest Drains' to help target essential works.*

Issue 3 Habitat Restoration of heathland and grassland within Inclosures

B5-3: The Open Forest Team will assist with the habitat restoration process to recover lost heathland habitats from within Inclosures and in time will take over the management of such sites as part of Open Forest Programme as the development of habitats dictate.

Heathland habitat restoration within Inclosures is an important element of the Forest Design Plan (see B3 Inclosure Plan). The Forestry Commission have a commitment to restore over 600 hectares of heathland from within Inclosures over the next 20 years⁴. A range of techniques and treatments are being utilised including:

- De-stumping (only where required in the interests of stock safety)
- Raking & burning of woody residues
- Chopping & mulching woody residues or leaving woody residues to decay naturally
- Infilling and disrupting man-made drainage channels
- Controlled burning of heathland type vegetation
- Scarifying sites to flatten furrows and break up rotten stumps
- Re-aligning Inclosure fences in accordance with the Fencing and Grazing Plan
- Allowing stock to graze transitional areas of heathland habitat prior to returning to Open Forest status
- Controlling bracken with approved herbicides
- Controlling re-growth of birch and pine.

The exact treatments used will depend upon each site's individual characteristics and sensitivities. It is clear from the monitoring of those sites cleared to date that some areas may take as long as 20-25 years before habitat restoration has reached the stage where sites can be truly considered part of the Open Forest.

Actions

- i. Work with forestry teams to implement appropriate techniques and treatments to ensure the successful transformation to heathland habitat.***
- ii. Take over the management of these areas once the succession to heathland has advanced to an appropriate stage***

⁴ By the end of 2007, 260 hectares of heathland have been restored from Inclosures.

Issue 4 Seeking Financial Support

Policy B5-4: We will continue to seek sources of funding and methods to generate income to allow heathland restoration and maintenance to continue.

It is not possible to meet restoration targets or continue to maintain restored habitats based on Forestry Commission internal funding alone, particularly in the current climate of cost cutting. Therefore it is important to seek alternative sources of funding either through special projects or by generation of income from heathland by-products. The Life 2, Life 3 and Pathfinder projects provided a significant contribution towards habitat restoration. Restoration of the remaining SSSI units are being funded under the Final 4000 project which is supported by DEFRA, Forestry Commission and the National Park Authority.

The Heathland team have also had successes in recent years in developing markets for heathland by-products such as bracken mulch (a large proportion of which is sold to Kew Gardens) and heather bales. However it is necessary to continue the search for new market opportunities.

Actions

- i. Seek opportunities to submit bids to secure external funding*
- ii. Raise revenue through sales of heathland by-products in existing markets*
- iii. Look for new market opportunities*

Issue 5 Depasturing of Commoners' Stock

Policy B5-5: The Forestry Commission will continue to support the depasturing of commoners' stock on all Open Forest heathland & grassland habitats and where possible will seek opportunities to improve the availability of grazing while operating within the constraints of the SAC Plan and Forest Design Plan.

The Forestry Commission see the depasturing of commoner's animals as a key management tool for sustaining the conservation status of the New Forest SAC with its unique matrix of rare habitats. The importance of grazing is being recognised and enhanced by 'The Verderers' Countryside Stewardship Scheme'. This scheme is a 10 year agreement between DEFRA and the Verderers which recognises and rewards the important contribution made by commoning to the ecology of the New Forest. The Scheme started on 1st October 2003 and runs to 30th September 2013.



Key projects such as Life 3 (completed in 2006) and Pathfinder (completed in 2007) have resulted in funding to undertake additional scrub management within certain mires and lawns which should improve these areas for grazing. Restoration of seasonal flooding across lawns may also boost productivity of grassland communities. The continued restoration of the New Forest SSSI should further enhance grazing opportunities. The challenge in the future will be to secure funding to allow maintenance of these areas to continue.

As land managers the Forestry Commission have a responsibility to control the spread of ragwort. Although Ragwort is a native species of the British Isles, it is specified as a noxious weed under the Weeds Act 1959. Ingesting ragwort causes toxins to be

produced in the liver which can have debilitating or fatal consequences, if eaten by horses and other grazing animals. The majority of Ragwort is pulled by hand, in preference to chemical control, due to the constraints posed by grazing livestock and sensitive botanical swards. Specific actions to support the de-pasturing of commoners stock are outlined below.

Actions

- i. Seeking opportunities in conjunction with major projects to derive a benefit for grazing***
- ii. Implementation of the Fencing & Grazing Plan (refer to Chapter B3 – MapB3.11a & Map B3.11b) to open up new grazing and help with the restoration process of heathland habitats within Inclosures.***
- iii. Consultation with the CDA through biannual liaison meetings with the CDA to review issues associated with the depasturing of commoners' stock.***
- iv. Carry out roadside cutting programme. Poor visibility of animals roaming the roadside verge is cited as a contributory reason leading to animal deaths on the unfenced highways of the Forest. The annual rotation of roadside cutting will continue with advice from the Verderers, Agisters and other stakeholders as required.***
- v. In the absence of acceptable alternative methods of control, annual contracts for pulling ragwort prior to the onset of seeding will continue across all the Crown land heathlands. Plants arising from this activity will be heaped at discrete locations for a rapid and comprehensive removal from all areas open to grazing by Commoner's stock.***

- vi. ***Developments in the control of ragwort outside of the New Forest will be monitored for cost-effective solutions, which may be applicable to Forest conditions⁵.***
- vii. ***Cut & burn programme (refer to Issue 6)***
- viii. ***Ragwort & bracken control (refer to Issue 8)***
- ix. ***Passageway access & maintenance (refer to Issue 10)***

Issue 6 Delivery of the Cut & Burn Programme

Policy B5-6: It is our aim to deliver annually agreed programmes within the timetable set by season and legislation to customary high standards

Controlled Burning is an effective management technique for vegetation control which, provides a number of benefits for habitat management and grazing. The Forestry Commission will continue to give priority to the achievement of an agreed programme of cutting and controlled burning to promote fresh growth of gorse, heather and *molinia* and to control the re-growth of Scots Pine. Controlled burning is recognised as being a primary management tool for the maintenance of wet and humid heaths and valley mires within the New Forest SAC. On average 400 hectares are burnt each year.



Cutting is used both in conjunction with burning and as an alternative method of vegetation control. Cutting is carried out using mowing/swiping with a tractor mounted machine or hand cutting with chainsaws, brush cutters, bow saws or loppers. Cutting is primarily used for controlling pine & birch succession, gorse, willow and general scrub management. On average 36 hectares are cut each year.

In recent years heather baling has taken place on up to 50 ha of heath to supply heather bales for large scale restoration projects such as those carried out under Life 3 and Pathfinder. Heather bales can be produced by request as part of the winter management of the Open Forest heathlands, particularly for dry heathland management. A maximum of 12,000–14,000 bales can be produced in a winter. The

⁵ Chemical trials were carried out in 2006 to test the effectiveness of the herbicide spray, Barrier H, on an old allotment site that was still fenced. Follow up monitoring in 2007 helped to assess the effectiveness of this herbicide which revealed that it was indeed control Ragwort effectively. However any chemical control on the open forest has to be carefully considered given the constraints imposed by livestock safety, biodiversity, cost and health & safety. It is a requirement of UKWAS to operate within a Chemical Plan.

limiting factor is their durability during storage. The bales need to be used within a year of being produced to avoid degradation.



Although heather baling will continue the area is likely to reduce to around 15-20 ha per annum to supply maintenance requirements and/or specific projects. It is also likely to be focused on humid or dry heaths which are more sensitive to burning.

Boundaries of cut and burn sites treated since 1991 are available on the Open Forest GIS management system to assist in planning future

annual cut and burn programmes ([Map 5.5](#)).

Benefits of Controlled Burning

- **Not normally governed by terrain** so can be used to control vegetation on more inaccessible areas such as slopes, ditches and banks which are difficult to treat using conventional methods using machinery.
- **Creates habitat diversity** by maintaining a mosaic of heathland plants in different growth stages which benefits different species. For example, Dartford Warblers like to inhabit the young dense gorse bushes, Woodlarks set up territories on burnt areas while reptiles and insects make use of the edge effect created by the burnt areas. Heather and gorse in particular retain their vigour if burned at the right stage in their growth cycles. Burn sites tend to be treated on a 23 year cycle for heather and 12-15 year cycle for gorse.
- **Removes accumulated biomass** thus reducing the natural fuel for wild fires and allows plant species to flourish from seed.
- **Keeps nutrient levels low** which is key for the heathlands survival.
- **Provides a food source for Commoner's animals** – Ponies, cattle and donkeys readily gather on recently burnt sites to browse the re-growth in the early spring, which is vital stage in their annual feeding cycle.
- **Cost effective** because technique allows control over large areas of ground @ £100/ha to carry out

Actions

- i. **Implementation of a cutting programme starting in October and continuing until the onset of spring. This programme refers to the:**
 - **cutting of firebreaks/traces round proposed burns**
 - **treatment of areas where there would be difficulty in controlling fire or risks of unacceptable damage to wildlife e.g. dry heaths.**

- *the treatment of areas of degenerate gorse that would not respond favourably to controlled burning.*
 - *cutting and baling of accessible areas to provide material for mire and heathland restoration*
- ii. Implementation of a burning programme. Most burning will occur in a 6 week period from late February to the end of March as vegetation dries out following the worst of the winter rains. Consideration will also be given to pre-Christmas burning⁶. However the programme will vary according to weather conditions, bird nesting season and reptile emergence. Three skilled teams will be assigned to the burning programme, weather permitting. An average of 12 hectares (30 acres) will be covered each day when suitable weather conditions persist. Fire fighting equipment will always be present on site. The fire service and, if necessary, the police, will be notified of the location, start and completion time for each burn.*
- iii. Care will be taken to locate fire traces to avoid their subsequent use as paths, especially by horse-riders.*

For guidance on Controlled burning refer to Controlled Burning Specifications in Part D.

Issue 7 Control of Exotic and invasive species including Birch & Pine

Control of Birch & Pine

Policy B5-7: We will continue to control the spread of birch seedlings and other invasive native woody species in line with the principles contained within Section 11 of the New Forest Act 1949



from existing woodland edges and more widespread colonisation by wind-borne seeding.

It is a requirement of the New Forest Act 1949 to keep the open Forest 'sufficiently free of coarse herbage, scrub and self-sown trees'. In addition, the favourable condition of particular areas of the SAC heathland habitat continues to be threatened by the colonisation of birch and pine ([Map 5.6](#)). The survival of gorse brakes may be endangered by over-shading, whilst lawns and heaths may be threatened by the encroachment

⁶ Burning is permitted between 1st November and 31st March.

Actions

- i. *Where location allows, control invasive woody species using techniques such as controlled burning, swiping, forage harvesting or hand pulling.*
- ii. *In more sensitive areas, where due to conservation requirements or where the age of the established birch or pine is such that it would not be controlled by the methods specified in Action i above, then the use of herbicides or chainsaws may be necessary.*
- iii. *Remove mature pines in accordance with Forestry Commission good practice either using a mechanised harvester, manual chainsaw or skyline.*



Control of Rhododendron and other exotic species

Policy B5-8: It is our aim to eradicate Rhododendron from the heathlands of the New Forest, and control the spread of other exotic and pest species.

A number of exotics and undesirable native species have colonised the Open Forest. Specific treatments vary from species to species (refer to Table B5-2) but in many instances removal of non-natives is carried out using a combination of mechanical clearance grubbing out the roots with an excavator and chemical spraying. Large scale programmes are in progress to tackle Rhododendron.

Rhododendron is a highly invasive shrub which has negligible nature conservation or browse value. Its dense shade excludes ground flora while its litter and leachates have a sterilising effect on the soil. Initial clearance of Rhododendron from the Crown land heathlands was largely achieved under the LIFE 2 programme with further removal carried out under Life 3. [Map B5.7](#) illustrates the extent of rhododendron clearance achieved through these clearance programmes.

Other exotic and pest species occurring across the heathlands, including Gaultheria, Cotoneaster, Himalayan Balsam and Crassula helmsii. Many of these species are extremely persistent and difficult to eradicate. Other new exotics species have also been recently found in mires and lawns including Skunk Cabbage, Parrots Feather and Pirri pirri.

Treatments to deal with exotic species can be harsh and potentially unsuitable for the sensitive New Forest environment. For example, current treatments for *Crassula helmsii* would be damaging to the native plant communities in the New Forest ponds so are unsuitable to implement.

Actions

- i. Progress with a programme of return visits to treat re-growth from stumps and newly germinating Rhododendron seedlings. Return visits will continue until there are no obvious signs of further regeneration.*
- ii. As little is known about the effects of the build up of toxins in the soil generated by rhododendron, a selection of sites will be monitored to record rates of vegetation recovery. Monitoring results will guide specifications for further management actions, if these are found to be necessary.*
- iii. Continue to follow developments in new technologies for treating persistent pest species*
- iv. Carry out trials as opportunity allows. Where methods are successful and funding allows, embark on a progressive programme of removal based upon the most appropriate method and treatment rotation*
- v. Monitor the location and spread of any existing or new exotic species across the New Forest heathlands*

Table B5-3: Exotics Treatments

Exotic	Characteristics	Method of Control
Rhododendron	A highly invasive shrub introduced from Asia as a garden ornamental shrub. Abundant in private grounds throughout the New Forest and surrounding area. It has negligible nature conservation or browse value. Its provides dense shade which excludes ground flora. Its litter and leachates also have a sterilising effect on the soil.	Where ground conditions and access allow, large areas of rhododendron clearance are tackled using a tracked excavator or blecovator as shown below. The arisings are raked up burnt in situ. Stumps and any regrowth are then treated with Glyphosate and High Trees Mixture B to prevent regrowth two years/two growing season after cutting. Where small patches of rhododendron persist or where areas are inaccessible for machinery they will be cut by hand to ground level and stems treated as above.
Gaultheria shallon	Invasive ericaceous shrub from NW America. Spreads by a system of underground rhizomes. Its leathery leaves resist penetration by herbicides and once established it dominates the ground and understorey layers of wood and heath.	To date Gaultheria has been raked and the roots scraped out using a 360 excavator ⁷ . In order to prevent regrowth the stumps are sprayed with Trichlopyr or Glyphosate (Glyphogen). Trial plots are on going to establish the most successful methods and spray regimes for removal
Turkey Oak	Introduced into Britain from the Balkans around 1750, and has been present in the New Forest in the late 19 th or 20 th century. It is invasive and is usually present as a small number of mature trees amongst a host of younger stems. It is of little timber value as it is prone to warping and shrinkage. A key host to the knopper gall. Can hybridise with native oaks thus compromising the genetic make up of native oak in the New Forest.	Hand cut by chain saw

⁷ Under the Life 2 Project, trials were carried out using pigs but it was not found to be a particularly good method of control

Exotic	Characteristics	Method of Control
Scots Pine	Although once native in the Forest the present trees have developed from introduced stock. Initially used as a nurse crop for broad leaved plantings. Highly invasive and where dense stands occur they act as a significant constraint on regeneration of native species.	Seedling pine controlled by burning or mowing/swiping with tractor mounted machine or hand cutting with chainsaws, brush cutters, bowsaws or loppers using FC staff, contractors or conservation volunteers. Mature pine is removed by mechanical means – chainsaw, harvesters or sky line depending upon amount to be removed and location
Red Oak	Introduced from North America as an amenity tree. Like Sweet Chestnut it does not support a rich insect or lichen community	Hand cut using chainsaws
Other species	A number of other non-native species have been planted in more recent times including hybrid lime and various conifer species such as Western Hemlock, Douglas fir, Lawsons cypress and Norway spruce	Treatment as for pine
North American skunk cabbage	Recently found in some mire systems	Dig out by hand
Japanese knotweed	Garden escapee which colonises along river banks and can become very invasive.	Mechanical control using blades which produce a clean cut or chemical treatment with glyphosate.
Crassula helmsii (Australian Stonecrop)	An aquatic plant from Australasia. Invasive in permanent and temporary ponds where its rapid growth creates a blanket cover which out competes native flora with associated impacts on invertebrates. Present in many temporary and permanent ponds through out the Forest	Chemical control using formulations containing glyphosate (or diquat which is currently under review by EC) but current chemicals are not suitable for use in New Forest ponds. Grazing by horses but crassula can then be spread on the hooves of animals.
Himalayan Balsam (Impatiens glandulifera)	Introduced from Asia as a garden exotic which has subsequently escaped and colonised riverbanks. Rivers provide a mechanism for its spread and colonisation.	Hand pulling, mechanical cutting below the lowest plant node, mowing or spraying with glyphosate.
Parrots Feather (Myriophyllum aquaticum)	Introduced from lowland central South America. Popular plant in garden ponds which has escaped to colonise sites with standing water. Recently found in s New Forest mire system.	Cutting, pulling, dredging. Chemical control possible but not suitable for use in sensitive mire systems.

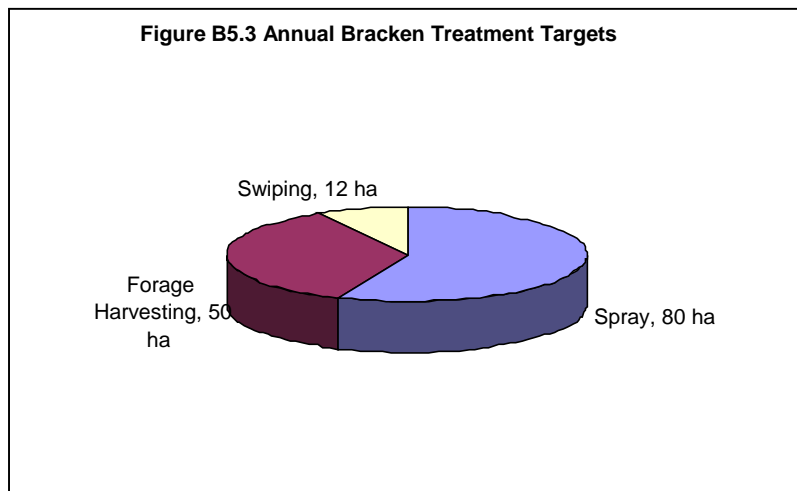
Significant pest species, Exotic/Invasive

Issue 8 Bracken and Ragwort Control

Policy B5-9: We will manage the range and density of bracken using a combination of cutting, forage harvesting and, treatment with approved herbicides and trial new methods as appropriate.

The full extent of the remaining areas of bracken on the Crown lands of the SAC will continue to be reviewed resulting in a strategic programme for bracken management, which applies a mixture of retention's, herbicide and mechanical treatments. The programme will be based upon our capability to deliver a realistic rotational programme of management. The extent of recent bracken treatments carried out

since 1992 (Forage Harvesting) and 1995 (bracken spraying) is presented in [Map 5.8](#).



Actions

- i. Continue to treat large areas of bracken treatment using a tractor mounted spray where possible. Asulam is the preferred spray for the treatment of bracken.***
- ii. Treat smaller more intricate areas using back pack sprayers or spray mounted quad bike.***
- iii. Look at introducing contracts for cutting bracken for animal bedding.***
- iv. Update of records using aerial photographs and ground survey to generate a reliable map to show areas of bracken which threaten key SAC habitats and to show which of these areas are accessible to wheeled vehicles. Use results to guide future decisions on the distribution and size of individual treatment units, including the location of areas to be retained.***
- v. Identify sites where bracken occurs over botanically rich sites which could be damaged from inappropriate bracken control.***
- vi. Review seasonal restrictions on the timing of treatments. This should include networking with the RSPB and Natural England to improve our understanding of the distribution of Nightjar nests so as to extend the season when cutting and spraying of bracken may occur.***
- vii. Review new or alternative methods to carry out forage harvesting as the current forage harvesting machines are no longer being manufactured. This could lead to future problems in maintaining and acquiring spare parts for existing machines.***
- viii. Looking at new ways of overcoming constraints relating to livestock, scale of treatments and topography in relation to bracken control.***
- ix. Trial bracken control using pigs. It was found during Gaultheria trials that pigs rooted up and destroyed bracken rhizomes which were mixed in with***

the Gaultheria. Therefore trial areas will be fenced off and pigs introduced to test their effectiveness solely against bracken.

- x. ***Consider feasibility of re-introducing traditional techniques such as bracken stomping.***

Issue 9 Management of Lawns & mires

Policy 5-10: The rotational programme for maintenance of mires and lawns across the Forest will continue.

In addition to existing long established areas, the maintenance of lawns and mires following restoration will become an integral part of the annual work programme. Under the Life 3 Project significant progress was made in restoring wetland and heathland habitats as detailed below and further areas are being restored to return the New Forest SSSI to favourable condition.

◆ Alluvial Grassland (Lawns)	141 ha
◆ Mires	184 ha
◆ Wet Heath	26 ha
◆ Dry Heath	9ha

Lawn and Mire maintenance largely involves rotation scrub clearance. Scrub clearance is generally carried out using chainsaws or tractor-mounted flail. On most sites scrub management is selective, based on rotational cutting of small patches of scrub, particularly those patches which have become tall and straggly. This rotational technique ensures that stands of scrub of different age structures are maintained. Brushwood is gathered up and burnt on site, although the number of burn sites are restricted to as few as possible to avoid damaging the ground surface. Any cut timber is stacked and left on site to dry before being sold and removed from site in the spring (if accessible). If the site is too wet to access material will be left *in situ* to rot. On most sites scrub management will be by selective by cutting of small patches, potentially on a rotational basis so that some scrub is left.

Another key aim of Mire restoration is to halt the nick-point erosion and prevent any further erosion cutting back into the mire system and lowering the water table. The work often aims to remove the artificial drainage patterns. The most successful technique to date has been the use of heather bales to plug and infill the channel. Heather bales (*Calluna vulgaris*) are cut locally from the forest and provide a cost effective and fairly robust method of infilling. The bales (75 cm x 50cm x 50cm) are packed in and held in place by chestnut stakes.

An advantage of using heather bales is that they can be used at points of headward erosion to support the leading edge of the peat and halt erosion by conveying water over the bales and on downstream. To avoid subsidence and degradation of the infill the water table needs to be supported throughout the year so that the bales are submerged. The bales can do this themselves by infilling with sediment and therefore becoming impermeable. However, to ensure success it is best to create impermeable dams of spoil or clay at intervals along the drainage channel to support the water level over the bales. When submerged and receiving inputs of fines and organic matter, the bales readily become colonised by mire and soakway plants. Spreading

remaining spoil over the surface of the bales once they have been installed can accelerate this colonisation and provide some additional stabilisation. Concerns have been raised by the commoning community with respect to the string holding bales together, but it is the Forestry Commission's opinion that the bales are robust to livestock and are not a hazard.

Whilst the Inclosure Plan addresses the restoration of lost lawns within Inclosures, the Forestry Commission also recognise that a number of lawns on the Open Forest have been lost over the years through such factors as scrub invasion and encroachment of transitional habitats. A factor in this loss of habitat has been a lack of resources to maintain habitats.

Techniques for mire and lawn restoration are described in more detail in the New Forest Wetland Management Plan and New Forest Wetland Management Plan – Practitioners Guide

Actions

- i. Continue programme of Mire and lawn restoration required to meet 2010 PSA target.***
- ii. Manage succession on grasslands to control encroachment of woody species.***
- iii. Monitor of rates of recovery on restored lawns and mires to establish the degree of recovery and the appropriate time to integrate these sites into rotational maintenance programmes.***
- iv. Evaluate feasibility of restoring lost lawns taking into account habitat value, location and integration with FDPs as part of major external funding programme.***



Scrub Clearance as part of mire restoration–
Stony Moors (Life 3)



Lawn Restoration
Allum Green/Markway Lawn

Issue 10 Passageway and Access Maintenance

Policy B5-11: We will undertake rotational maintenance to ensure continued access for Commoners, Forestry Commission staff and the Fire & Rescue Service, to manage the livestock and vegetation of the Forest and also enable public access.

Access to the open forest is a requirement for stock management, heathland management and in times of emergency both for fire fighting and animal rescue. Teams will continue to be responsible for the maintenance and up keep of Open Forest tracks.

Actions

- i. Maintenance and upkeep of forest tracks with an emphasis on the use of soft engineering techniques with repairs concentrating on wet hollows and crossing points for watercourses.***
- ii. Draw up a focused management programme for repair.***
- iii. Discuss the selection process for tracks maintenance through the Access Forum and OFAC.***
- iv. When determining the methods for repair check ecological interests on a site by site basis.***

Issue 11 Survey, Monitoring and Research

B5-12: Surveying and monitoring will be strategically planned to provide targeted information to help inform heathland management decisions and address areas of particular concern.

Monitoring is an important tool to ensure that our heathland management techniques are working effectively and to steer future management. Due to finite resources, future surveying and monitoring needs to be strategically planned to provide targeted, accessible information to inform heathland management decisions. It is important that monitoring data is compiled and stored in a form that can be used by land managers.

Actions

- i. Carry out a review of existing data. To date monitoring has been carried out in a random, piecemeal fashion in a form that has not always been useful for helping to steer management decisions. Thus a review needs to be carried out to:***
 - ***Establish what monitoring has actually been done***
 - ***Review results and incorporate findings into management decisions (N.B Gorse Plots)***
 - ***Store data in GIS System or shared drives***
- ii. Prepare Strategic Monitoring Programme Plan to***
 - ***Identify what specific information is required to guide management decisions***
 - ***Determine monitoring techniques required to establish the success or otherwise of heathland management regimes, restoration techniques and maintenance requirements.***
 - ***Collate the results of trials***
 - ***Allow identification of areas that give cause for concern***
- iii. Provide support for student research projects relating to heathland. Supporting student projects gives the Forestry Commission opportunities to gather data and learn useful information about an area/topic that we might not otherwise have the financial resources or staff to explore.***
- iv. Provide a proactive approach to universities for specific areas that FC would like investigated to ensure that topics are included on prospective student project lists and are interesting enough to engage students.***
- v. Increase share & exchange of data with HBIC and amateur groups who gather species data on the forest using experienced and qualified recorders. It would be beneficial to continue to build relationships with these groups to allow the exchange of information particularly in relation to the location of rare and endangered species and/or BAP species to help inform the Open Forest OSA process.***

Issue 12 Prevention of Uncontrolled Fire

Policy B5-13: We will endeavour to protect the Heathlands from uncontrolled fire through education programmes to inform the public of the dangers of heathland fires and by working with Hampshire Fire & Rescue Service, neighbouring land owners and other relevant groups to maximise fire prevention.

Uncontrolled heathland fires can be very damaging to heathland communities and pose a danger to both to people and property. In the summer months the heathlands are vulnerable to both accidental fires and arson attacks.

Actions

The Forestry Commission is taking a proactive role in heathland fire prevention through:

- i. Revision and updating of the fire plan***
- ii. Working closely with Hampshire Fire & Rescue to prevent fires***
- iii. Cracking down on anti-social behaviour and increasing public awareness through FC Community Ranger patrols particularly in fire hotspots such as the Waterside***
- iv. Managing the structure of heathlands to help control fire through the maintenance of a diverse community structure, fire breaks and good access for fire fighting.***

Note for FC Staff

**A copy of the fire plan can be found in
T:\OPERATIONS\3.22Fire\Fire Plan**



Issue 13 Impacts of climate change on the New Forest Heathlands

Policy B5-14: We will monitor the impacts of climate change on the New Forest Heathlands and adapt our practices as required and take into account findings of research and national advice.

Climate change has a number of potential impacts upon heathland management, particularly in relation to seasonal changes which affect activities such as burning where sensitive thresholds apply. For example spring seems to have been coming earlier to the Forest and this is indeed reflected in the climate statistics with March showing an average temperature rise of 0.55°C between the climate averages based on data from 1961 to 1990 and 1971 to 2000. This temperature rise is resulting in an earlier nesting season and earlier emergence of reptiles from hibernation which, is already having significant implications for the window of opportunity in which to undertake the annual burn programme. For example, in 2007 the window of opportunity was reduced to two weeks primarily due to the wet winter weather conditions and a mild spring.

Although research is emerging on the various impacts of climate change, it is not yet clear exactly what climate change scenarios will emerge and what the precise impacts will be on heathland communities will be.

Actions

- i. Maintain habitats in a good diverse condition to provide a buffer to climate change in the short to medium term while allowing natural adaptation to take place.**
- ii. Monitor changes and adapt management practices in response to climate change as required.**

3.2 Summary

Table B5-4: Implementation of Heathland Plan Actions

Policy	Action	Implementation Responsibility	Target Implementation Date										
			08/09	09/10	10/11	11/12	12/13						
Issue 1 Consultation & Stakeholder involvement													
<i>Policy B5-1: The Forestry Commission will work closely with the Open Forest Advisory Committee, Natural England and other bodies as required to apply and deliver Heathland Management Plan objectives</i>	Seasonal management programmes drawn-up through the workings of the Open Forest Advisory Committee.	Open Forest Manager											
	Networking with other heathland managers to keep abreast of new research and developments.	Open Forest Manager											
Issue 2 Protection & Enhancement of New Forest SSSI													
<i>Policy B5-2: We will carry out our obligations as land managers under Section 28G of the Wildlife and Countryside Act 1981 to protect and enhance the New Forest Site of Special Scientific Interest (SSSI). Every effort will be made to achieve our PSA Target for Open Forest (Heathland) SSSI units by 2010.</i>	Continue to develop work programmes to restore Open Forest heathland SSSI units to favourable condition using appropriate techniques (refer to Issue 3)	Ecologist & Open Forest Manager											
	Make reference to the NF Wetland Management Plan/Practitioners Guide to determine suitable techniques for carrying out wetland restoration, prioritise areas for restoration and identify issues that need to be considered as part of project planning.	Ecologist & Open Forest Manager											
	Timely consultation and liaison with Natural England and other key stakeholders including the Verderers and CDA. Implementation of Open Forest Operational Sites Assessments (OSAs).	Ecologist & Open Forest Manager											
	Development of integrated GIS based open forest management system based upon SSSI condition assessment units.	Open Forest Manager											
	Use findings of recent report on 'Channel erosion in New Forest Drains' to help target essential works	Ecologist											
Issue 3 Habitat Restoration of Heathland & Grassland within Inclosures													
<i>B5-3: The Open Forest Team will assist with the habitat restoration process to recover lost heathland habitats from within Inclosures and in time will take over the management of such sites as part of Open Forest Programme as the development of habitats dictate.</i>	Work with forestry teams to implement appropriate techniques and treatments to ensure the successful transformation to heathland habitat.	Ecologist & Open Forest Manager											
	Take over the management of these areas once the succession to heathland has advanced to an appropriate stage.	Open Forest Manager											

Policy	Action	Implementation Responsibility	Target Implementation Date				
			.08/09	09/10	10/11	11/12	12/13
Issue 4 Seeking Financial Support							
<i>Policy B5-4: We will continue to seek sources of funding and methods to generate income to allow heathland restoration and maintenance to continue</i>	Seek opportunities to submit bids to secure external funding.	Senior Management Team	.....			
	Raise revenue through sales of heathland by-products in existing markets.	Open Forest Manager	.....			
	Look for new market opportunities	Open Forest Manager	.....			
Issue 5 Depasturing of Commoners' Stock							
<i>Policy B5-5: The Forestry Commission will continue to support the depasturing of commoners' stock on all Open Forest heathland & grassland habitats and where possible will seek opportunities to improve the availability of grazing while operating within the constraints of the SAC Plan and Forest Design Plan.</i>	Seek opportunities in conjunction with major projects to derive a benefit for grazing.	Ecologist & Open Forest Manager	.....			
	Implementation of the Fencing & Grazing Plan	Planning, Walk Forester	.....			
	Consultation with the CDA through biannual liaison meetings to review issues associated with the depasturing of commoners' stock	Ecologist & Open Forest Manager	.....			
	Roadside Cutting Programme	Open Forest Manager	.....			
	Ragwort Pulling Programme	Open Forest Manager	.....			
	Developments in the control of ragwort outside of the New Forest will be monitored for cost-effective solutions which may be applicable to Forest conditions.	Open Forest Manager	.....			
	Bracken control (refer to Issue 8)						
	Cut & burn programme (refer to Issue 6)						
Passageway access & maintenance (refer to Issue 10)							
Issue 6 Delivery of the Cut & Burn Programme							
<i>Policy B5-6: It is our aim to deliver annually agreed programmes within the timetable set by season and legislation to customary high standards</i>	Implementation of the cutting programme, starting in October and continuing until the onset of spring.	Open Forest Manager	.....			
	Management of the burn programme. Most burning will occur in a 6 week period from late February to the end of March as vegetation dries out following the worst of the winter rains. However the programme will vary according to weather conditions, bird nesting season and reptile emergence.	Open Forest Manager	.....			
	Three skilled teams will be assigned to the burning programme, weather permitting. An average of 12 hectares (30 acres) will be covered each day when suitable weather conditions persist. Fire fighting equipment will always be present on site. The fire service and, if necessary, the police, will be notified of the location, start and completion time for each burn. Care will be taken to locate fire traces to avoid their subsequent use as paths, especially by horse-riders	Open Forest Manager	.....			

Policy	Action	Implementation Responsibility	Target Implementation Date									
			.08/09	09/10	10/11	11/12	12/13					
Issue 7 Control of Exotics & Invasive Species including Birch and Pine												
<i>Policy B5-8: We will continue to control the spread of birch seedlings and other invasive native woody species in line with the principles contained within Section 11 of the New Forest Act 1949</i>	Where location allows, control invasive woody species using techniques such as controlled burning, swiping, forage harvesting or hand pulling	Open Forest Manager									→	
	In more sensitive areas, where due to conservation requirements or where the age of the established birch or pine is such that it would not be controlled by the above operations then the use of herbicides or chainsaws may be necessary.	Open Forest Manager									→	
	Remove mature pines in accordance with Forestry Commission good practice either using a mechanised harvester, manual chainsaw or skyline.	Open Forest Manager									→	
<i>Policy B5-8: It is our aim to eradicate Rhododendron from the heathlands of the New Forest, and control the spread of other exotic and pest species.</i>	Progress with a programme of return visits to treat re-growth from stumps and newly germinating Rhododendron seedlings as necessary. Return visits will continue until there are no obvious signs of further regeneration.	Open Forest Manager									→	
	As little is known about the effects of the build up of toxins in the soil generated by rhododendron, a selection of sites will be monitored to record rates of vegetation recovery. Monitoring results will guide specifications for further management actions, if these are found to be necessary.	Ecologist										→
	Continue to follow developments in new technologies for treating persistent pest species.	Open Forest Manager & Ecologist										→
	Carry out trials as opportunity allows. Where methods are successful and funding allows, embark on a progressive programme of removal based upon the most appropriate method and treatment rotation.	Open Forest Manager & Ecologist										→
	Monitor the location and spread of any existing or new exotic species across the New Forest heathlands.	Ecologist										→
Issue 8 Bracken Control												
<i>Policy B5-9: We will manage the range and density of bracken using a combination of cutting, forage harvesting and, treatment with approved herbicides and trial new methods as appropriate</i>	Continue to treat large areas of bracken treatment using a tractor mounted spray where possible.	Open Forest Manager									→	
	Treat smaller more intricate areas using back pack sprayers or spray mounted quad bike.	Open Forest Manager									→	
	Look at introducing contracts for cutting bracken for animal bedding										→	
	Update of records using aerial photographs and ground survey to generate a reliable map to show areas of bracken which threaten key SAC habitats and to show which of these areas are accessible to wheeled vehicles. Use results to guide future decisions on the distribution and size of individual treatment units, including the location of areas to be retained.	Open Forest Manager & Ecologist										→
	Identify sites where bracken occurs over botanically rich sites which could be damaged from inappropriate bracken control.	Open Forest Manager & Ecologist										→
	Trial bracken control using pigs. It was found during Gaultheria trials that pigs rooted up and destroyed bracken rhizomes which were mixed in with the Gaultheria. Therefore trial areas will be fenced off and pigs introduced to test their effectiveness solely against bracken	Open Forest Manager & Ecologist		•								→
	Review seasonal restrictions on the timing of treatments. This should include networking with the RSPB and Natural England to improve our understanding of the distribution of Nightjar nests so as to extend the season when cutting and spraying of bracken may occur.	Open Forest Manager & Ecologist		•								→
	Review new or alternative methods to carry out forage harvesting as the current forage harvesting machines are no longer being manufactured. This could lead to problems in maintaining and acquiring spare parts for existing machines	Open Forest Manager										→
	Looking at new ways of overcoming constraints relating to livestock, scale of treatments and topography	Open Forest Manager										→
	Consider feasibility to re-introducing traditional techniques such as bracken stamping	Open Forest Manager										→

Policy	Action	Implementation Responsibility	Target Implementation Date				
			08/09	09/10	10/11	11/12	12/13
Issue 9 Management of Lawns & Mires							
<i>Policy 5-10: The rotational programme for maintenance of mires and lawns across the Forest will continue</i>	Continue programme of Mire and lawn restoration required to meet 2010 PSA target.	Open Forest Manager & Ecologist					
	Manage succession on grasslands to control encroachment of woody species.	Open Forest Manager & Ecologist					
	Monitor of rates of recovery on restored lawns and mires to establish the degree of recovery and the appropriate time to integrate these sites into rotational maintenance programmes	Ecologist					
	Evaluate feasibility of restoring lost lawns taking into account habitat value, location and integration with FDPs	Planning & Ecologist		•			
Issue 10 Passageway and access maintenance							
<i>Policy B5-11: We will undertake rotational maintenance to ensure the continued access for Commoners, Forestry Commission staff and the Fire & Rescue Service, to manage the livestock and vegetation of the Forest and also enable public access.</i>	Maintenance and upkeep of forest tracks with an emphasis on the use of soft engineering techniques with repairs concentrating on wet hollows and crossing points for watercourses.	Open Forest Manager					
	Draw up an annual management programme for repair of tracks through OFAC & the Access Forum.	Open Forest Manager					
	When determining the methods for repair check ecological interests on a site by site basis.	Ecologist					
Issue 11 Survey, Monitoring & Research							
<i>B5-12: Surveying and monitoring will be strategically planned to provide targeted information to help inform heathland management decisions and address areas of particular concern.</i>	Carry out a review of existing data to: -Establish what monitoring has actually been done -Review results and incorporate findings into management decisions (N.B Gorse Plots) -Store data in GIS System or shared drives	Ecologist		•			
	Prepare Strategic Monitoring Programme Plan to: -Identify what specific information is required to guide management decisions -Determine monitoring techniques required to establish the success or otherwise of heathland management regimes, restoration techniques and maintenance requirements. Collate the results of trials to allow identification of areas that give require further treatment/action	Ecologist		•			
	Provide support for student research projects relating to heathland.	Ecologist					
	Provide a proactive approach to universities for specific area that FC would like investigated to ensure that topics are included on prospective student project lists and are interesting enough to engage students.	Ecologist					
	Share & exchange of data with amateur groups who gather species data on the forest often using experienced and qualified recorders to allow the exchange of information particularly in relation to the location of rare and endangered species and/or BAP species to help inform the Open Forest OSA process	Ecologist/Planning					

Policy	Action	Implementation Responsibility	Target Implementation Date				
			08/09	09/10	10/11	11/12	12/13
Issue 12 Prevention of Uncontrolled Fire							
<i>Policy B5-14: We will endeavour to protect the Heathlands from uncontrolled fire through education programmes to inform the public of the dangers of heathland fires and by working with Hampshire Fire & Rescue Service, neighbouring land owners and other relevant groups to maximise fire prevention.</i>	Revision and updating of the fire plan	Operations Manager	.....	.....	.....	.....	.....
	Work closely with Hampshire Fire & Rescue to prevent fires	Operations Manager, Open Forest Manager, Communications Manager	.....	.....	.....	.....	.....
	Cracking down on anti-social behaviour and increasing public awareness through FC Community Ranger patrols particularly in fire hotspots such as the Waterside	Communications Manager, Keepers & Rangers	.....	.....	.....	.....	.....
	Managing the structure of heathlands to help control fire through the maintenance of a diverse community structure, fire breaks and good access for fire fighting.	Open Forest Manager	.....	.....	.....	.....	.....
Issue 13 Impacts of Climate Change on the New Forest Heathlands							
<i>Policy B5-14: We will monitor the impacts of climate change on the New Forest Heathlands and adapt our practices as required and take into account findings of research and national advice.</i>	Maintain habitats in a good diverse condition to provide a buffer to climate change in the short to medium term while allowing natural adaptation to take place.	Ecologist & Open Forest Manager	.....	.....	.....	.....	.....
	Monitor changes and adapt management practices in response to climate change as required.	Ecologist & Open Forest Manager	.....	.....	.....	.....	.....

Table B5-5: Monitoring Policies & Actions against National Park Purposes and SE Forestry and Woodlands Framework

Policy	Action	National Park Purposes			SE Forestry and Woodlands Framework
		To conserve and enhance the natural beauty, wildlife and cultural heritage	To promote opportunities for understanding and enjoyment of its special qualities	Seek to foster the economic and social well-being of local communities within the National Park	
Issue 1 Consultation & Stakeholder involvement					
<i>Policy B5-1: The Forestry Commission will work closely with the Open Forest Advisory Committee, Natural England and other bodies as required to apply and deliver Heathland Management Plan objectives.</i>	Seasonal management programmes drawn-up through the workings of the Open Forest Advisory Committee.	✓	✓	✓	1,3,4,5,6,9,10,11,12
	Networking with other heathland managers to keep abreast of new research and developments.				9
Issue 2 Protection & Enhancement of New Forest SSSI					
<i>Policy B5-2: We will carry out our obligations as land managers under Section 28G of the Wildlife and Countryside Act 1981 to protect and enhance the New Forest Site of Special Scientific Interest (SSSI). Every effort will be made to achieve our PSA Target for Open Forest (Heathland) SSSI units by 2010.</i>	Continue to develop work programmes to restore Open Forest heathland SSSI units to favourable condition using appropriate techniques (refer to Issue 3)	✓			5
	Make reference to the NF Wetland Management Plan/Practitioners Guide to determine suitable techniques for carrying out wetland restoration, prioritise areas for restoration and identify issues that need to be considered as part of project planning.				5
	Timely consultation and liaison with Natural England and other key stakeholders including the Verderers and CDA. Implementation of Open Forest Operational Sites Assessments (OSAs).				5
	Development of integrated GIS based open forest management system based upon SSSI condition assessment units.				5,9
	Use findings of recent report on 'Channel erosion in New Forest Drains' to help target essential works				5
Issue 3 Habitat Restoration of Heathland & Grassland within Inclosures					
<i>B5-3: The Open Forest Team will assist with the habitat restoration process to recover lost heathland habitats from within Inclosures and in time will take over the management of such sites as part of Open Forest Programme as the development of habitats dictate.</i>	Work with forestry teams to implement appropriate techniques and treatments to ensure the successful transformation to heathland habitat.	✓			4,5,9
	Take over the management of these areas once the succession to heathland has advanced to an appropriate stage.				4,5,9
Issue 4 Seeking Financial Support					
<i>Policy B5-4: We will continue to seek sources of funding and methods to generate income to allow heathland restoration and maintenance to continue</i>	Seek opportunities to submit bids to secure external funding.			✓	12
	Raise revenue through sales of heathland by-products in existing markets.				12
	Look for new market opportunities				12
Issue 5 Depasturing of Commoners' Stock					
<i>Policy B5-5: The Forestry Commission will continue to support the depasturing of commoners' stock on all Open Forest heathland & grassland habitats and where possible will seek opportunities to improve the availability of grazing while operating within the constraints of the SAC Plan and Forest Design Plan.</i>	Seek opportunities in conjunction with major projects to derive a benefit for grazing.			✓	4
	Implementation of the Fencing & Grazing Plan				9
	Consultation with the CDA through biannual liaison meetings to review issues associated with the depasturing of commoners' stock.				4
	Roadside Cutting				4
	In the absence of acceptable alternative methods of control, annual contracts for pulling ragwort prior to the onset of seeding will continue across all the Crown land heathlands. Plants arising from this activity will be heaped at discrete locations for a rapid and comprehensive removal from all areas open to grazing by Commoner's stock.				12
	Developments in the control of ragwort outside of the New Forest will be monitored for cost-effective solutions which may be applicable to Forest conditions.				12
	Bracken control (refer to Issue 8)				
	Cut & burn programme (refer to Issue 6)				
	Passageway access & maintenance (refer to Issue 10)				

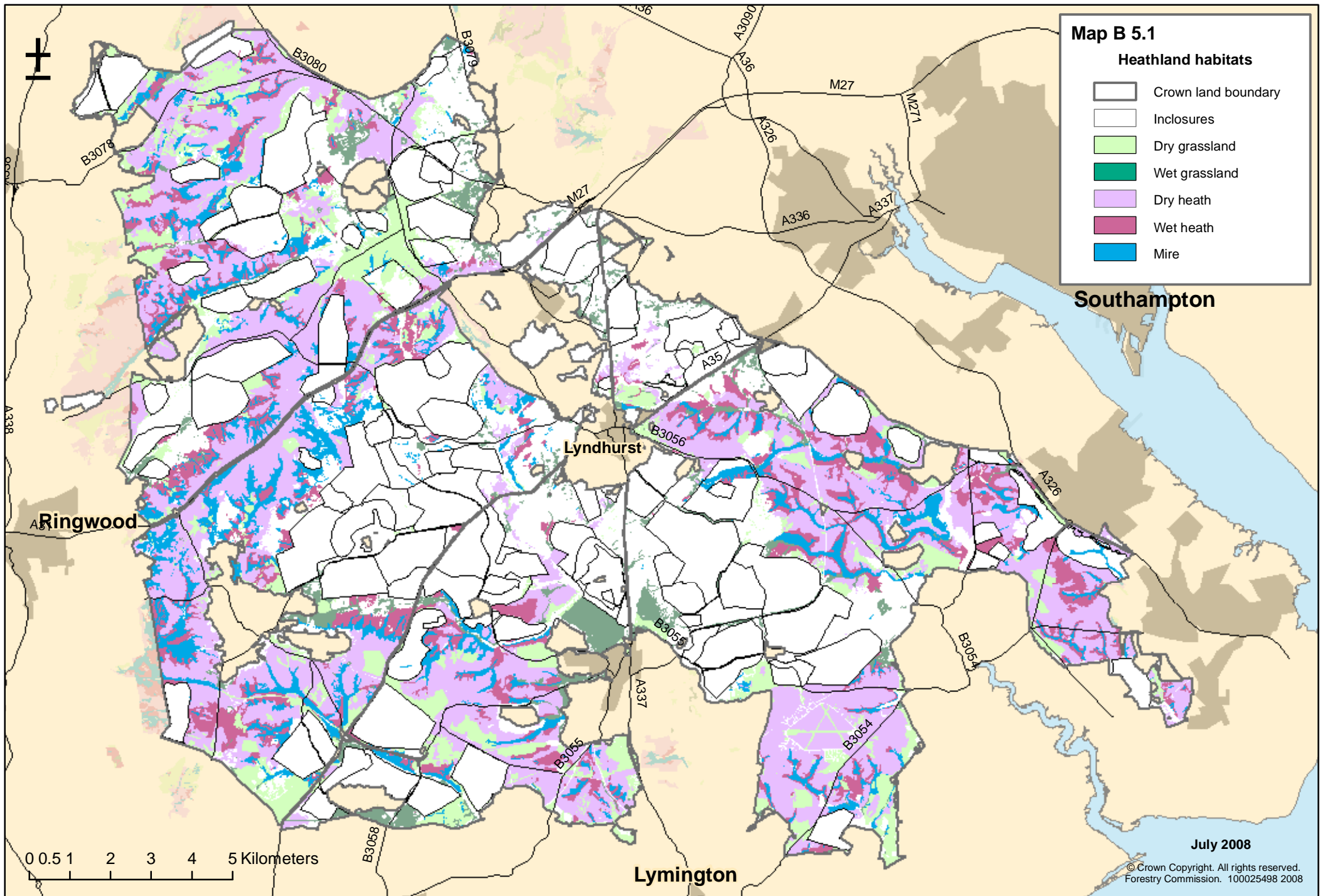
Policy	Action	National Park Purposes			SE Forestry and Woodlands Framework
		To conserve and enhance the natural beauty, wildlife and cultural heritage	To promote opportunities for understanding and enjoyment of its special qualities	Seek to foster the economic and social well-being of local communities within the National Park	
Issue 6 Delivery of the Cut & Burn Programme					
<i>Policy B5-6: It is our aim to deliver annually agreed programmes within the timetable set by season and legislation to customary high standards</i>	Management of the cutting programme, starting in October and continuing until the onset of spring.				4,5
	Management of the burn programme. Most burning will occur in a 6 week period from late February to the end of March as vegetation dries out following the worst of the winter rains. However the programme will vary according to weather conditions, bird nesting season and reptile emergence.	✓	✓	✓	4,5
	Three skilled teams will be assigned to the burning programme, weather permitting. An average of 12 hectares (30 acres) will be covered each day when suitable weather conditions persist. Fire fighting equipment will always be present on site. The fire service and, if necessary, the police, will be notified of the location, start and completion time for each burn. Care will be taken to locate fire traces to avoid their subsequent use as paths, especially by horse-riders				10
Issue 7 Control of Exotics & Invasive Species including Birch and Pine					
<i>Policy B5-7: We will continue to control the spread of birch seedlings and other invasive native woody species in line with the principles contained within Section 11 of the New Forest Act 1949</i>	Where location allows, control invasive woody species using appropriate techniques such as controlled burning, swiping, forage harvesting or hand pulling.				5
	In more sensitive areas, where due to conservation requirements or where the age of the established birch or pine is such that it would not be controlled by the above operations then the use of herbicides or chainsaws may be necessary.	✓			5
	Remove mature pines in accordance with Forestry Commission good practice either using a mechanised harvester, manual chainsaw or skyline.				5
<i>Policy B5-8: It is our aim to eradicate Rhododendron from the heathlands of the New Forest, and control the spread of other exotic and pest species.</i>	Progress with a programme of return visits to treat re-growth from stumps and newly germinating Rhododendron seedlings. Return visits will continue until there are no obvious signs of further regeneration.				5
	As little is known about the effects of the build up of toxins in the soil generated by rhododendron, a selection of sites will be monitored to record rates of vegetation recovery. Monitoring results will guide specifications for further management actions, if these are found to be necessary.	✓			5
	Continue to follow developments in new technologies for treating persistent pest species.				5
	Carry out trials as opportunity allows. Where methods are successful and funding allows, embark on a progressive programme of removal based upon the most appropriate method and treatment rotation.				5
	Monitor the location and spread of any existing or new exotic species across the New Forest heathlands.				5

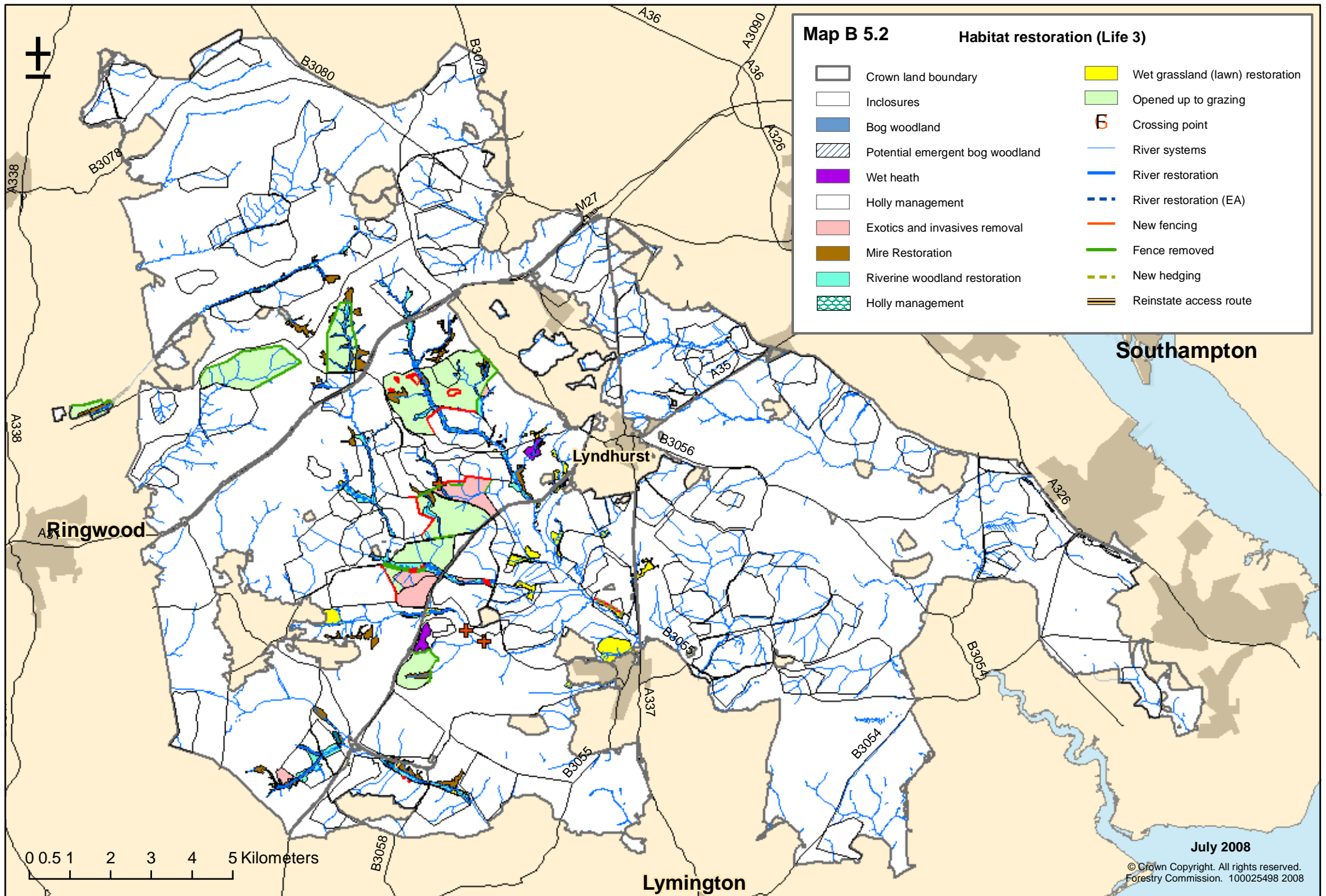
Policy	Action	National Park Purposes			SE Forestry and Woodlands Framework
		To conserve and enhance the natural beauty, wildlife and cultural heritage	To promote opportunities for understanding and enjoyment of its special qualities	Seek to foster the economic and social well-being of local communities within the National Park	
Issue 8 Bracken control					
<i>Policy B5-9: We will manage the range and density of bracken using a combination of cutting, forage harvesting and, treatment with approved herbicides and trial new methods as appropriate</i>	Continue to treat large areas of bracken treatment using a tractor mounted spray where possible.				5
	Treat smaller more intricate areas using back pack sprayers or spray mounted quad bike.				5
	Update of records using aerial photographs and ground survey to generate a reliable map to show areas of bracken which threaten key SAC habitats and to show which of these areas are accessible to wheeled vehicles. Use results to guide future decisions on the distribution and size of individual treatment units, including the location of areas to be retained				5,9
	Update data with regard to 1997 Jonathan Cox survey identifying sites where bracken occurs over botanically rich sites which could be damaged from inappropriate bracken control.				5,9
	Trial bracken control using pigs. It was found during Gaultheria trials that pigs rooted up and destroyed bracken rhizomes which were mixed in with the Gaultheria. Therefore trial areas will be fenced off and pigs introduced to test their effectiveness solely against bracken	✓		✓	5
	Review seasonal restrictions on the timing of treatments. This should include networking with the RSPB and Natural England to improve our understanding of the distribution of Nightjar nests so as to extend the season when cutting and spraying of bracken may occur.				5
	Review new or alternative methods to carry out forage harvesting as the current forage harvesting machines are no longer being manufactured. This could lead to problems in maintaining and acquiring spare parts for existing machines				10,12
	Looking at new ways of overcoming constraints relating to livestock, scale of treatments and topography				9
	Consider feasibility of re-introducing traditional techniques such as bracken stomping				5
Issue 9 Management of Lawns & Mires					
<i>Policy 5-10: The rotational programme for maintenance of mires and lawns across the Forest will continue</i>	Continue programme of Mire and lawn restoration required to meet 2010 PSA target. Manage succession on grasslands to control encroachment of woody species				5,9
	Monitor of rates of recovery on restored lawns and mires to establish the degree of recovery and the appropriate time to integrate these sites into rotational maintenance programmes	✓		✓	9
	Evaluate feasibility of restoring lost lawns taking into account habitat value, location and integration with FOPs				5,9
Issue 10 Passageway and access maintenance					
<i>Policy B5-11: We will undertake rotational maintenance to ensure continued access for Commoners, Forestry Commission staff and the Fire & Rescue Service, to manage the livestock and vegetation of the Forest, and enable public access.</i>	Maintenance and upkeep of forest tracks with an emphasis on the use of soft engineering techniques with repairs concentrating on wet hollows and crossing points for watercourses.				2
	Draw up an annual management programme for repair of tracks through OFAC & Access Forum		✓		2
	When determining the methods for repair check ecological interests on a site by site basis.				5

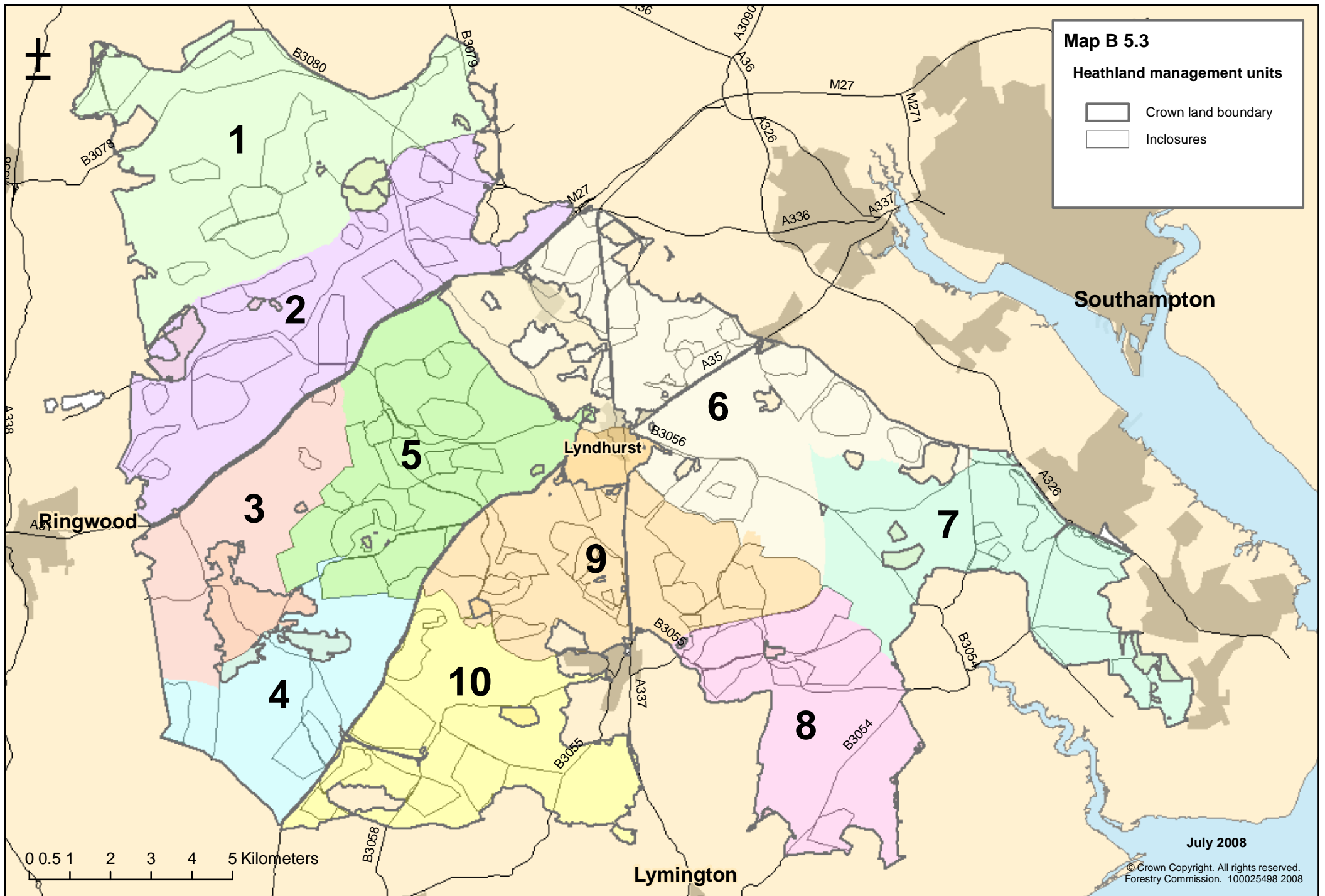
Policy	Action	National Park Purposes			SE Forestry and Woodlands Framework
		To conserve and enhance the natural beauty, wildlife and cultural heritage	To promote opportunities for understanding and enjoyment of its special qualities	Seek to foster the economic and social well-being of local communities within the National Park	
Issue 11 Survey, Monitoring & Research					
<i>B5-12: Surveying and monitoring will be strategically planned to provide targeted information to help inform heathland management decisions and address areas of particular concern.</i>	Carry out a review of existing data to: -Establish what monitoring has actually been done -Review results and incorporate findings into management decisions (N.B Gorse Plots) -Store data in GIS System or shared drives				9
	Prepare Strategic Monitoring Programme Plan to: -Identify what specific information is required to guide management decisions -Determine monitoring techniques required to establish the success or otherwise of heathland management regimes, restoration techniques and maintenance requirements. Collate the results of trials to allow identification of areas that give require further treatment/action.		✓		9
	Provide support for student research projects relating to heathland.				3,11
	Provide a proactive approach to universities for specific area that FC would like investigated to ensure that topics are included on prospective student project lists and are interesting enough to engage students.				3,11
	Share & exchange of data with amateur groups who gather species data on the forest often using experienced and qualified recorders to allow the exchange of information particularly in relation to the location of rare and endangered species and/or BAP species to help inform the Open Forest OSA process				3,11,5
Issue 12 Prevention of Uncontrolled Fire					
<i>Policy B5-13: We will endeavour to protect the Heathlands from uncontrolled fire through education programmes to inform the public of the dangers of heathland fires and by working with Hampshire Fire & Rescue Service, neighbouring land owners and other relevant groups to maximise fire prevention.</i>	Revision and updating of the fire plan				9
	Work closely with Hampshire Fire & Rescue to prevent fires				1,5,8
	Cracking down on anti-social behaviour and increasing public awareness through FC Community Ranger patrols particularly in fire hotspots such as the Waterside		✓		1,11
	Managing the structure of heathlands to help control fire through the maintenance of a diverse community structure, fire breaks and good access for fire fighting.				8
Issue 13 Impacts of Climate Change on the New Forest Heathlands					
<i>Policy B5-14: We will monitor the impacts of climate change on the New Forest Heathlands and adapt our practices as required and take into account findings of research and national advice.</i>	Maintain habitats in a good diverse condition to provide a buffer to climate change in the short to medium term while allowing natural adaptation to take place.				4
	Monitor changes and adapt management practices in response to climate change as required.				4,9

SE Regional Framework Outcomes

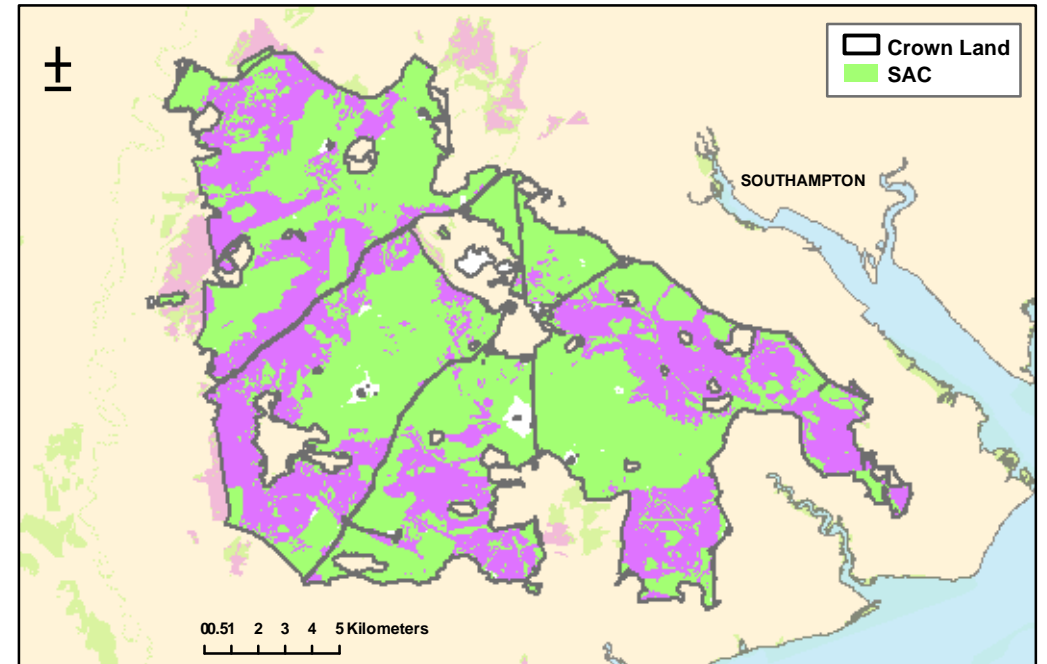
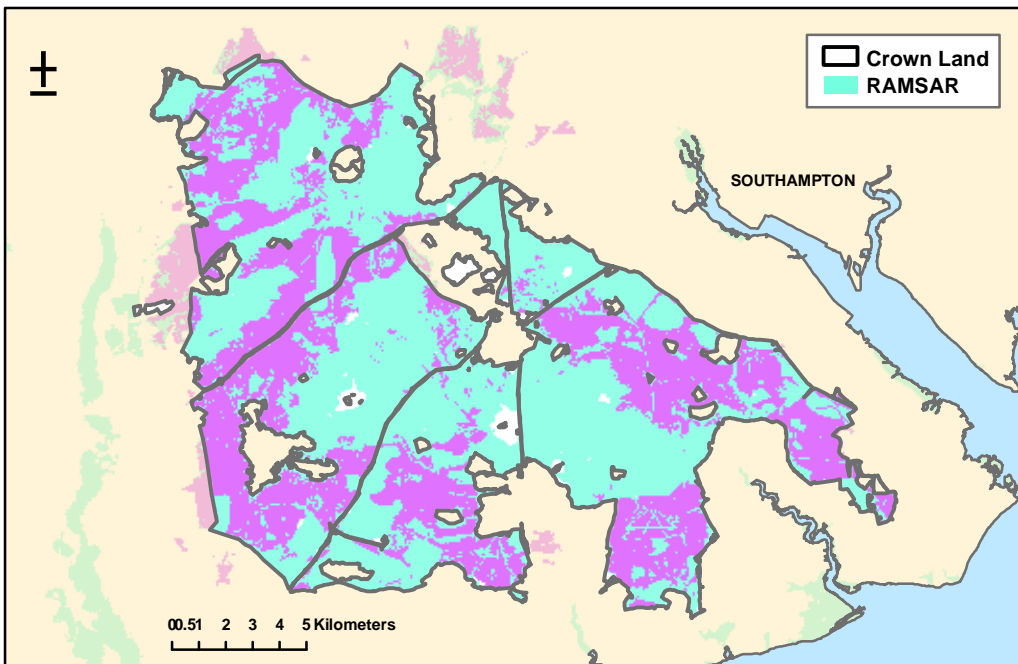
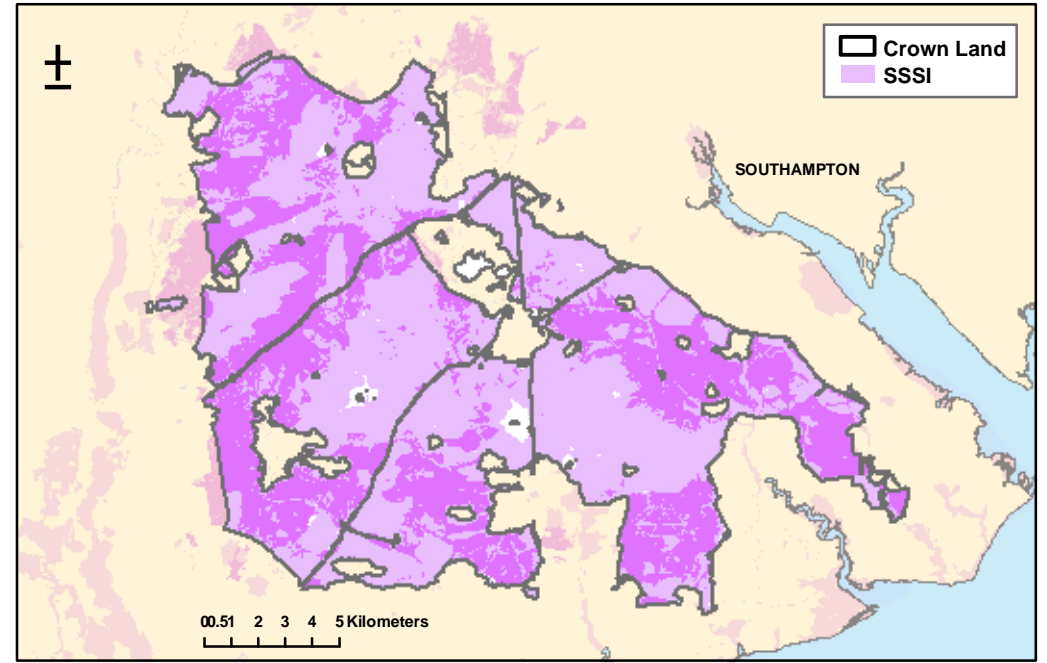
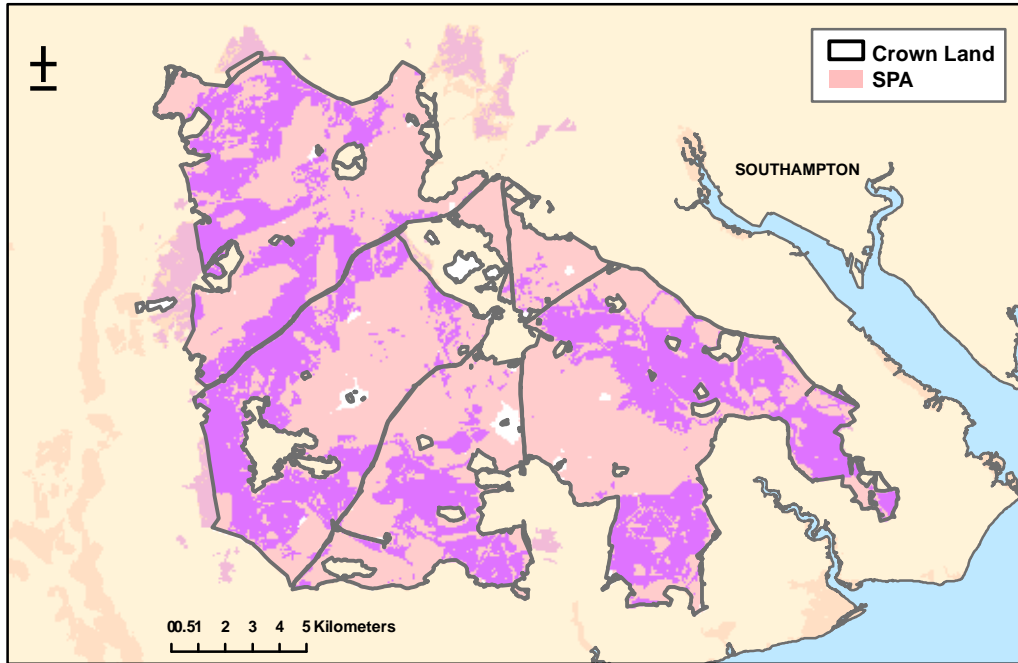
- 1 - Trees and woodlands supporting the development of sustainable communities
- 2 - More People's health & well being improved through visiting woodlands
- 3 - Greater use being made of trees and woodlands for community projects and activities
- 4 - Woodlands enhancing and protecting the region's environment together with safeguards for the heritage features within them
- 5 - Woodland habitats and species being maintained or brought into good ecological condition
- 6 - The economic value of woodland products to the region being increased
- 7 - Woodland playing a greater role in attracting tourism, inward investment and other economic activity
- 8 - Woodlands and trees, especially ancient woodlands and veteran trees, protected from loss
- 9 - Integrated, strategic planning of woodland management
- 10 - The Skills base needed to manage our woodlands
- 11 - Increasing public awareness about woodlands and their management
- 12 - The financial viability of woodland management secured


























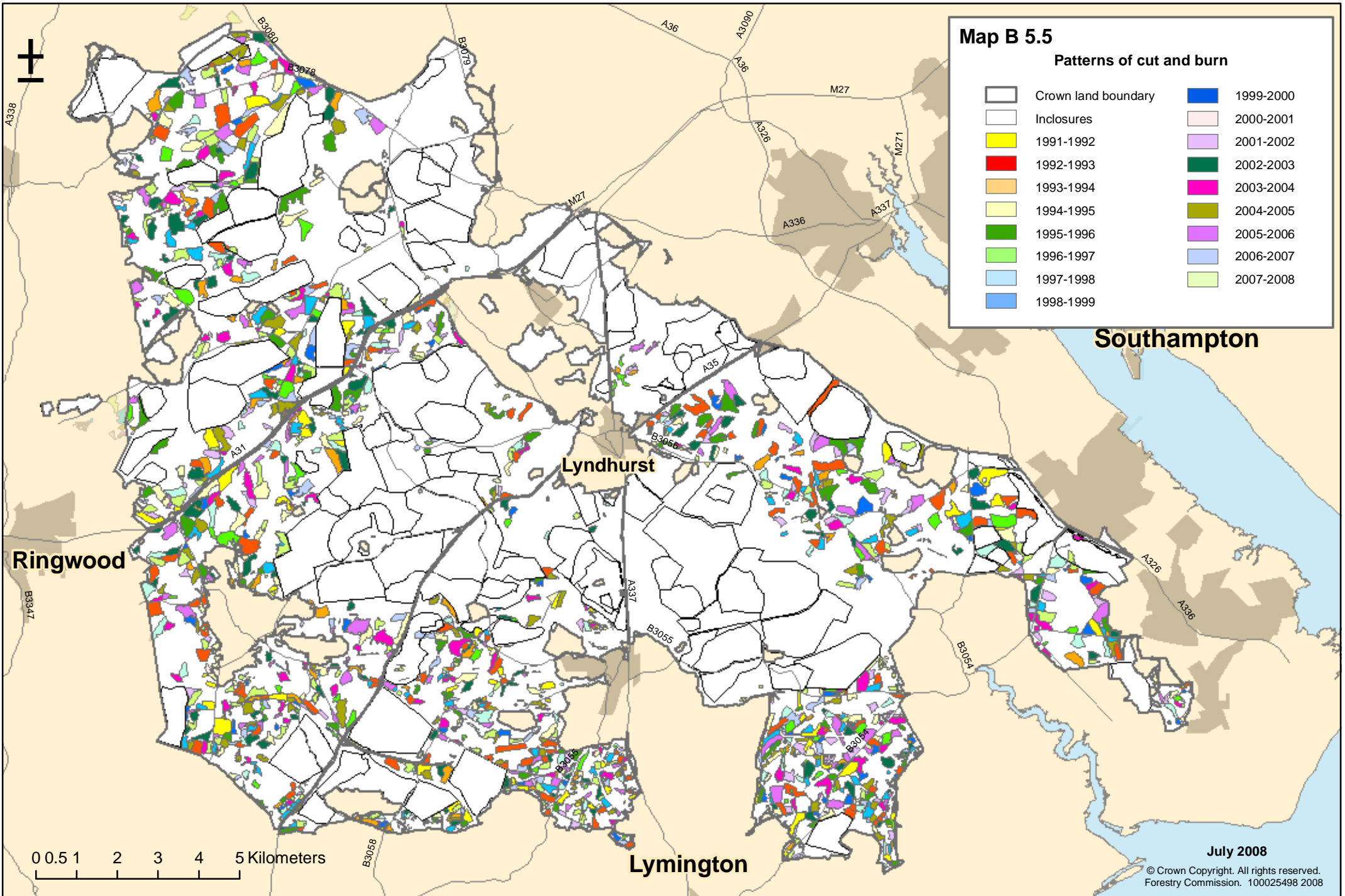
THE NEW FOREST CROWN LANDS MANAGEMENT PLAN
Map B 5.4 Heathland and statutory designations



Map B 5.5

Patterns of cut and burn

- | | | | |
|---|---------------------|---|-----------|
|  | Crown land boundary |  | 1999-2000 |
|  | Inclosures |  | 2000-2001 |
|  | 1991-1992 |  | 2001-2002 |
|  | 1992-1993 |  | 2002-2003 |
|  | 1993-1994 |  | 2003-2004 |
|  | 1994-1995 |  | 2004-2005 |
|  | 1995-1996 |  | 2005-2006 |
|  | 1996-1997 |  | 2006-2007 |
|  | 1997-1998 |  | 2007-2008 |
|  | 1998-1999 | | |



Southampton

Lyndhurst

Ringwood

Lymington
















0 0.5 1 2 3 4 5 Kilometers

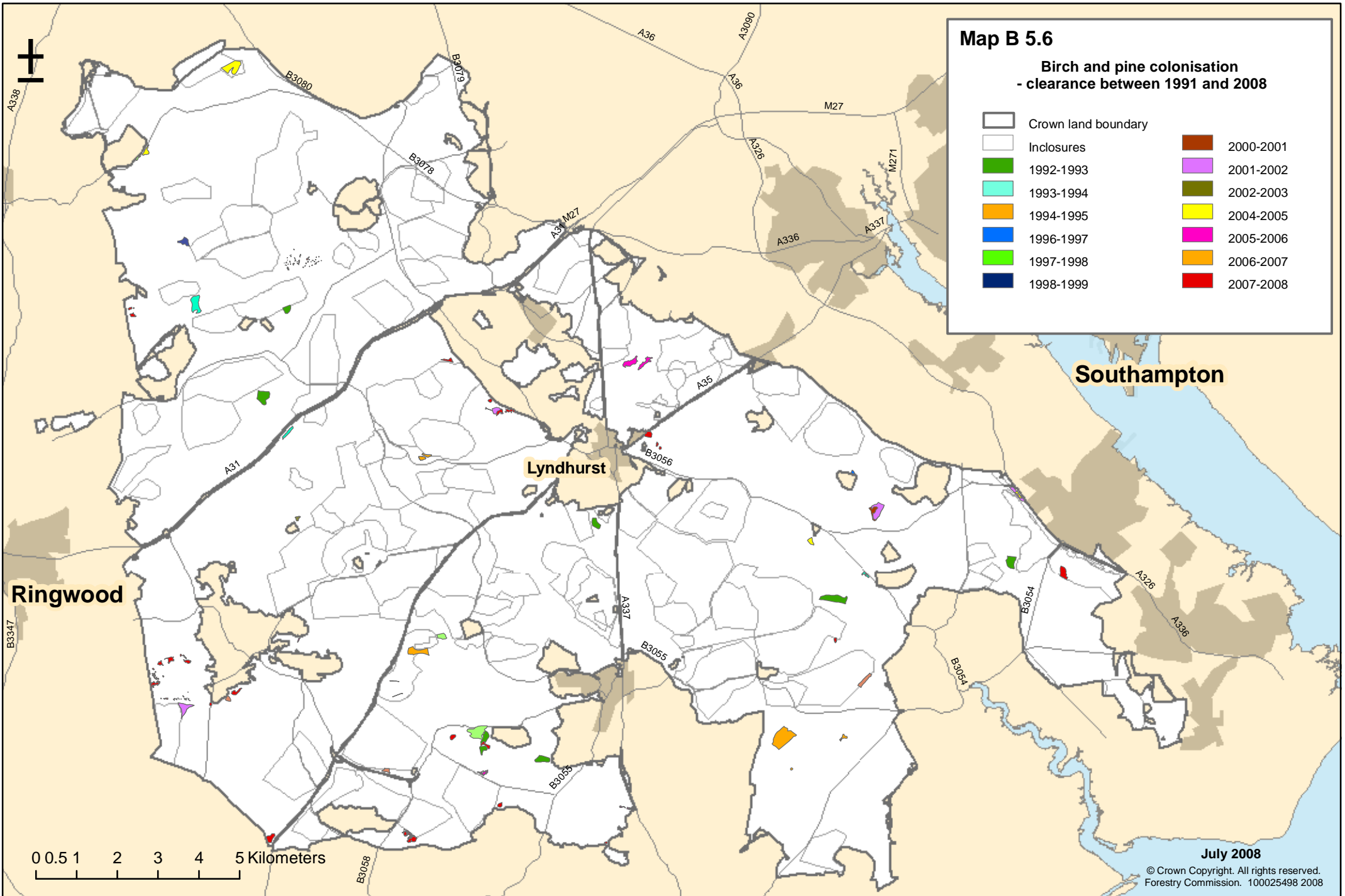
July 2008

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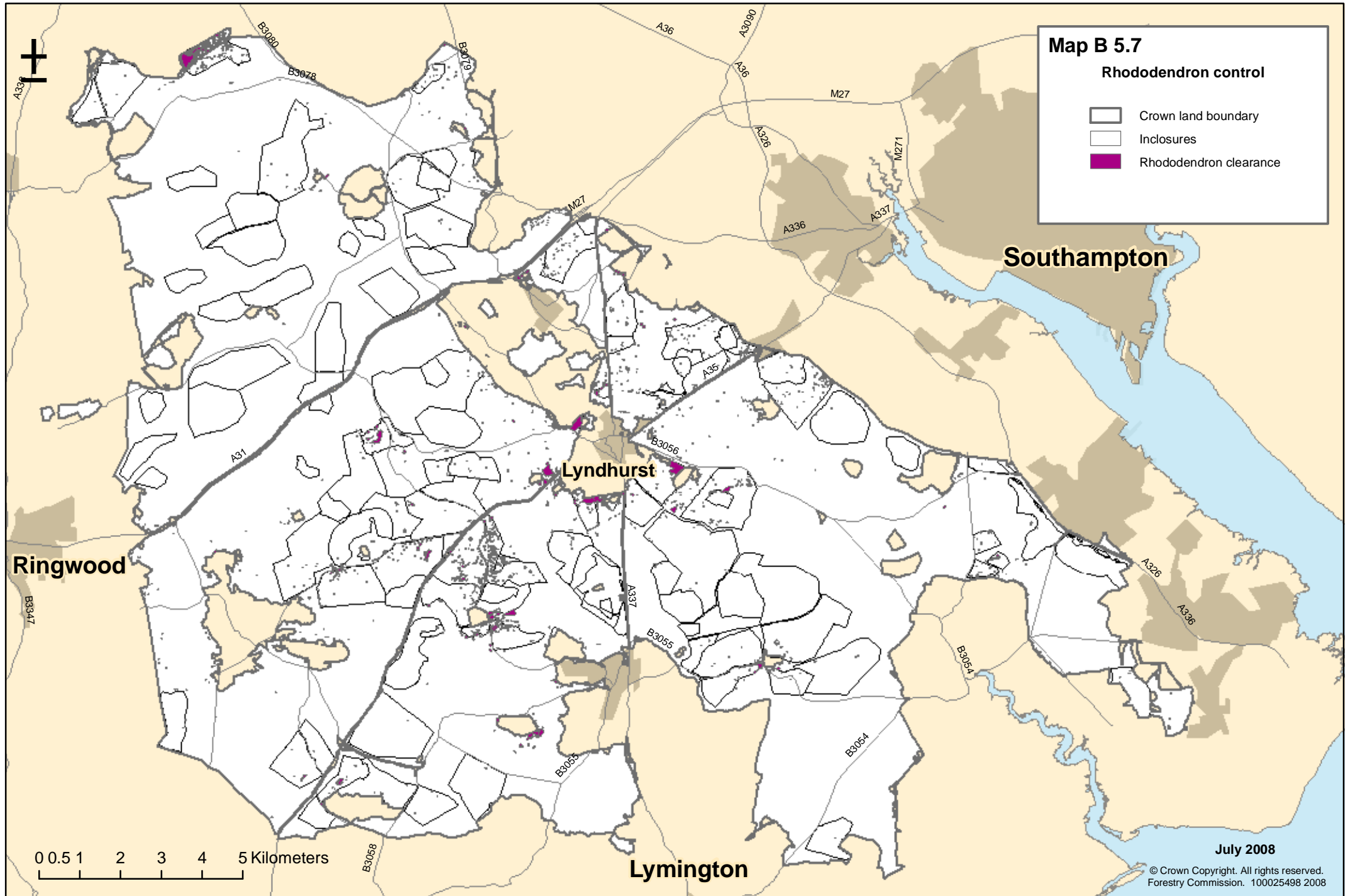
Map B 5.6

**Birch and pine colonisation
- clearance between 1991 and 2008**

- | | | | |
|---|---------------------|---|-----------|
|  | Crown land boundary |  | 2000-2001 |
|  | Inclosures |  | 2001-2002 |
|  | 1992-1993 |  | 2002-2003 |
|  | 1993-1994 |  | 2004-2005 |
|  | 1994-1995 |  | 2005-2006 |
|  | 1996-1997 |  | 2006-2007 |
|  | 1997-1998 |  | 2007-2008 |
|  | 1998-1999 | | |



July 2008



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