APPENDIX D

Habitat Management Principles Summary Tables

(i) Management Issues

Management Issues	Pasture Woodland	Riverine & Bog Woodland	Heathland Communities (dry, wet, dry grassland, wet grassland & Mire)	Ponds	Rivers & Streams	Coastal Habitats (saltmarsh & mudflats)	Inclosure/Plantation Woodland		Current Strategy, Plan, Policy, Project or Programme in place to help address Issue
							Open Habitat Restoration (heathland/ mire)	Broadleaf Woodland Restoration	
Livestock Management/Maintaining Grazing									
Importance of maintaining depasturing grazing livestock and impacts of grazing levels/intensity on the development of habitat mosaics.	✓	✓	✓	✓	✓	✓	✓	✓	NF HLS Programme
Livestock safety - ensuring terrain is safe for grazing livestock e.g filling in deep ditches							✓	✓	NF HLS Programme
Livestock drifting - ensuring suitable network of drift fences and pounds are in place and that terrian is safe to round up livestock from horseback e.g risk from stumps, deep ridge & furrow and drains.							✓	✓	NF HLS Programme
Maintaining access to manage stock - e.g. keeping key driftways & rides open, maintaining fords & bridges	✓	✓	✓		✓		✓	✓	
Locations of winter stock feeding sites to avoid damaging sensitive habitats	✓		✓						Agreement of locations between Verderers and NE
Suitability of pesticide treatments for depastured stock eg certain wormers need to be avoided	✓		✓				✓	✓	
Animal health -e.g. TB protection measures and desire/need to keep closed herds which is a key issue for some grazing agreements.	✓	✓	✓	✓	✓	✓	✓	✓	Verderers TB Control Plan
Water provision for grazing livestock when water resources dry up (climate change issue associated with grazing agreements)	✓		✓				✓	✓	
Woodland Management									
Maintaining supply of sustainable timber to markets from Inclosures and private plantations/woodlands.							✓	✓	NF Inclosures Forest Plan, Woodland Management Plans
Transforming the NF Inclosures to enhance NF habitats and landscape qualities through phased restoration, including throwing open Inclosures at the right time.							✓	✓	NF Inclosures Forest Plan, FE Thinning Plan. FE Fencing Plan
Building the deadwood resouce of standing & fallen deadwood and recognising its role in promoting habitat and woodland regeneration	✓	✓						✓	UKWAS, Deadwood Policies (various landowners)
Protecting veteran/ancient trees while maintaining public safety	✓	✓						✓	Tree safety policies (various landowners)
Remediating adverse impacts of artificial drainage within Pasture woodland, Inclosures/Plantations (and Open forest)	✓	✓	✓				✓	✓	NF Inclosures Forest Plan
Regeneration of native trees including species diversification, composition and age structure	✓	✓						✓	NF Inclosures Forest Plan
Deer impact	✓	✓						✓	Deer Plan (FE), Private Estates, Deer Management Forums, CS Agreements
Grey squirrel impact	✓	✓						✓	FE activity, CS Agreements
Legacy of historic regeneration plots in A&O woodland and requirement to restructure plots to promote restoration	✓								FE Open Forest Management programe
Management of Pre-Inclosure Woodland (former A&O woodland trapped in modern day Inclosures)								✓	NF Inclosures Forest Plan
Development and control of Emergent Woodland	✓		✓				✓		NF Inclosures Forest Plan
Damage caused by headward erosion of drains and watercourses within Inclosures and onto Open Forest from	✓	✓	✓		✓		✓	✓	NF Freshwater & Wetland Habitats Restoration Strategy
Planting/Invasion of non-native trees & shrubs	✓	✓	✓				✓	✓	NF Inclosures Forest Plan
Wetland Management									
Introduction/Invasion of non-native aquatic plants & species		✓		✓	✓				NF Non-natives Project
Maintaining coppicing of alder/sallow stands in riverine woodland		✓						✓	NF Inclosures Forest Plan
Restoring trapped pre-Inclosure riverine woodland and bog woodland		✓						✓	NF Inclosures Forest Plan
Impact of over-deepening of watercourses, loss of natural flooding regime and floodplain connection	✓	✓	✓		✓		✓	✓	NF Freshwater & Wetland Habitats Restoration Strategy
Damage caused by headward erosion of drains and watercourses (e.g. migration of drains within Inclosures and onto Open Forest from Inclosures)	✓	✓	✓		✓		✓	✓	NF Freshwater & Wetland Habitats Restoration Strategy
Removal of obstructions & artificial structures					✓				EA Catchment Plans
Formation & clearance of debris dams - policy and conflicting views	✓	✓			✓			✓	Debris Dam Policy (FE)

(i) Management Issues (contd)

Open Habitat Management								
Scrub invasion (e.g. birch, pine, gorse) requiring a continual programme of rotational vegetation management through burning & cutting to maintain a mosaic of scrub structures and ages.			✓				✓		Open Forest Management Programme
Extent of invasive exotic, non-native species & native requiring management or control	✓	✓	✓	✓	✓		✓	✓	NF Inclosures Forest Plan, Open Forest Management Programme, NF Non-natives Project,
Impacts of artificial drainage.			✓		✓		✓	✓	NF Inclosures Forest Plan, NF HLS Project, NF Freshwater & Wetland Habitats Restoration Strategy
Reduction in wet grassland productivity & increased scrub management where drying has occurred			✓				✓		Open Forest Management Programme
Adverse erosion and creation of too much bare ground & distrubance due to recreational pressure	✓	✓	✓				✓	✓	NF Recreation Strategy, NF HLS Project
Climate Change (wider topic linked to other management issues listed) but includes issues such as wildfire, drought, flooding, pest/diseases	✓	✓	✓	✓	✓	✓	✓	✓	Expert Advice notes from a range of organisations
Spread of Pest & Diseases	✓	✓	✓	✓	✓		✓	✓	Expert Advice notes from a range of organisations
Water quality issues (e.g. diffuse pollution, nitrates & phosphates, saline intrusion)					✓				EA Catchment Plans, Blue Horizons, Think Tank
Coastal erosion of saltmarsh						✓			EA Coastal Management Plans, North Solent Shoreline Management Plan
Funding and application of suitable monitoring programmes to demonstrate management objectives for habitat restoration are being achieved and to track maintenance requirements for previously restored habitats	✓	✓	✓	✓	✓	✓	✓	✓	NF HLS Programme
Recreation & People Management									
Recreation infrastructure & associated impacts to habitats & livestock (including disturbance, stock feeding etc)	✓	✓	✓	✓	✓		✓	✓	NF Recreation Strategy, NF HLS Project
General									
Habitat data - much of the previous habitat mapping is now out of date or areas have changed significantly as restoration work has been carried out. Historic habitat management data/records have been lost or forgotten about over the years	✓	✓	✓	✓	✓	✓	✓	✓	NE IPENS, NF HLS, DEFRA funding, HBIC Ecological Opportunity & Network Mapping

APPENDIX D

Habitat Management Principles Summary Tables

(ii) Habitat Management Principles

GENERIC HABITAT MANAGEMENT PRINCIPLES	Pasture Woodland (Crown lands & wider study area)	Riverine & Bog Woodland	Heathland Communities (dry, wet, dry acid grassland &	Ponds	Rivers & Streams	Inclosure/Plantation Woodland	
						Open habitat restoration (heathland/mire)	Broadleaf woodland restoration
Stock Management							
Maintain depasturing of Commoning Stock with periodic fluctuations over time in the overall animal numbers.	✓	✓	✓			✓ (where thrown open)	✓ (where thrown open)
Cut roadside verges where visibility is impaired for road safety/protection of livestock.			✓				
Where habitats are in unfavourable condition as a result of over or under grazing mechanisms under existing or future agri-environment schemes could be used to manipulate grazing pressure subject to agreement from NE.	✓		✓			✓*	✓*
Tight control on the provision of supplementary feeding, restricted to authorised locations on non-sensitive habitats			✓				
No stock feeding on key sensitive open forest habitats.	✓	✓					
Maintain access for stock management (and Fire & Rescue Services) including tracks, passageways, fords, bridges and drift fence lines. Some infrastructure will need to be rationalised in consultation with the Verderers.	✓	✓	✓		✓	✓	✓
No use of anti-parasitic drugs likely to damage non-target species (e.g. Avermectin wormers)	✓	✓	✓	✓	✓	✓	✓
Woodland Management (primarily Open Forest but several principles also apply to Inclosures/Plantations on private land)							
No supplementary planting of trees, shrubs or herbs except where required due to lack of regeneration or climate change adaption (depending upon location this may require the consent of NE or FC)	✓	✓	✓				
No felling or lopping of native trees other than pollarding except where appropriate for H&S, to manage emergent woodland, for holly management or to restore regeneration plots	✓	✓					
Carry out holly pollarding to protect lichen communities & provide winter fodder for stock	✓	✓					✓
Target control of deer	✓	✓					✓
Target control of grey squirrels	✓	✓					✓
Deadwood should be left in situ and/or not moved except where specific registered commoning rights associated with certain properties permit the collection of hand of fuel wood for the sole purpose of burning on the fire within the dwelling or for tree safety reasons to protect people, stock, property or infrastructure.	✓	✓					
Sales of wood are only permitted under approved programmes of tree removal or pollarding due to habitat restoration, removal of exotics/non-natives, clearance of track blockages.	✓	✓					
On the Crown Lands deadwood should be managed in accordance with the latest FE Deadwood Policy	✓	✓				✓	✓
Landowners have a duty of care around dangerous trees. However, veteran/ancient trees need particularly careful monitoring and should be treated with the minimum management intervention required to make them safe and giving consideration to Bats. Where feasible, it would be preferable to find a way for people to avoid/be re-routed around veteran/ancient trees rather than remove or carry out radical surgery to the tree itself.	✓	✓					✓
Following a severe storm event implement necessary actions (which depending upon location may need to be agreed with NE) within affected woods to restore access, to make the wood safe for the public and livestock, remove hazards to property and infrastructure while at the same time protecting the biodiversity opportunities and natural ecological processes that storm events induce.	✓	✓					✓
Where units are in unfavourable condition due to lack of natural regeneration the priority is to secure tree regeneration through, natural protective means where possible and in the presence of grazing rather than through sowing or supplementary planting to promote the development of a natural structure and genetic make-up.	✓	✓					✓
Emergent woodland may need management where succession is threatening priority/SAC open habitats. In this instance targeted scrub removal (usually agreed through OFAC on the Crown lands) may need to be carried out. The general consensus is to keep the Open Forest ratio of woodland to open habitat similar although the precise location may wax and wane according to natural processes.	✓						

(ii) Habitat Management Principles (contd)

Early 20th C emergent woodland that has spread over former SAC open habitat that is restorable may be removed as part of targeted restoration programmes but will only generally take place where there are clear benefits for restoration of glades, lawns or heathland edge. (subject to NE/OFAC agreement)	✓						
Where non-native trees and shrubs are exceeding 1% cover these may be removed to help the unit achieve favourable SSSI status. Non natives include Turkey Oak, Red Oak, conifer species (except Yew), Sweet Chestnut, Hornbeam, Sycamore, Poplars, Ornamental maples, Rhododendron, Gaultheria, Cotoneaster. Where Sycamore occurs in combination with ash a higher proportion may be tolerated as a replacement for ash.	✓	✓	✓			✓	✓
The removal of larger stands of Scots pine from A&O woods will continue except where they provide shelter to groves of ancient trees, form an important landscape feature or lie deep within a wood where their removal would be damaging to the surrounding habitat.	✓						
The complete removal of Rhododendron and Gaultheria should be attempted. Foliar spraying of small bushes or previously treated areas or had cutting to ground with follow up spraying is preferential to removal by tracked excavator and burning.	✓	✓	✓			✓	✓
Wetland Restoration & Hydrological Management							
No installation of new drainage schemes with maintenance of existing drains prioritised to health & safety requirements and/or protection of infrastructure	✓	✓	✓			✓	✓
Cut timber, such as conifer logs, should not be left on the floodplain where it can wash into streams causing dense log jams rather than natural debris dams.		✓			✓	✓	✓
Control of invasive aquatic non-natives likely to outcompete native flora including Crassula helmsii, Himalayan Balsam, Japanese knotweed, Giant Hogweed, American skunk cabbage, Parrots feather, Pitcher plant	✓	✓	✓	✓	✓	✓	✓
Retention of natural or near natural river system including physical, hydrological and channel morphology	✓	✓	✓		✓	✓	✓
Retain debris dams except where they pose a threat to infrastructure, private property or livestock. Partial removal should be considered over wholescale removal.	✓	✓	✓		✓	✓	✓
Consider re-coppicing old alder stands or willow stands where there is scope to restore valuable fen communities		✓					✓
Restore modified and over-deepened streams with regard to the NF Freshwater and Wetland Restoration Strategy. This may include a range of restoration measures from bed level raising, meander restoration, stabilisation of nick-points, reconnection with the natural floodplain	✓	✓	✓		✓	✓	✓
Restore mire habitats (this may be linked to the principles in the NF Freshwater & Wetland Restoration Strategy or Forest Plan for the New Forest Inclosures			✓			✓	
Halting peat slumping and headward erosion of artificial drainage channels into mire systems & wet heath using appropriate restoration techniques			✓			✓	
Remove artificial drains within Inclosures where they are interfering with the natural hydrology and habitat restoration potential of mires, wet heath or wet woodland. Shallow drains may naturally infill but deeper drains may need to be restored in accordance the New Forest Freshwater and Wetland Habitats Restoration Strategy.						✓	✓
Restore Inclosure streams to their natural channel and bed-level.					✓	✓	✓
Conifer plantations should be removed from the floodplain either through gradual thinning for clearfelled with cut timber removed from site							✓
Alder swamps and linear stands of alder should be retained		✓			✓		✓
Record/map remnant habitats within Inclosures including wet heath, mires and seepages						✓	✓
Open Habitat Management							
No cultivation or reseeding			✓				
Practise rotational management of Gorse using controlled burning &/or mechanical methods to regenerate aging gorse brakes, in advance of senescence.			✓			✓	
Control pine and birch regeneration using controlled burning &/or mechanical methods to prevent woodland colonisation of quality heathland & open habitats. The cut & burn programme aims to average 300 to 400 ha per year.			✓			✓	
Carry out rotational heather management using controlled burning &/or mechanical methods/heather baling to regenerate heather stands			✓			✓	
Manage of bracken stands using bracken forage harvesting with a programme increased from 100 ha per year to 300/500 ha per year subject to available machinery and resources. Rolling, brush cutting are also management options.			✓			✓	

(ii) Habitat Management Principles (contd)

Controlled burning will only take place between 1st Nov and 31st March. Burn sites will usually be smaller than 5 ha but can be up to 20 ha if required. Sites must be checked for nesting or reptile activity before cutting or burning is undertaken especially late in season and during warm spells.			✓			✓	
The former bracken herbicide control option (i.e. Asulox) is now banned and generally had a limited effect. The use of legally approved herbicides are a legitimate option for SSSI/SAC land managers where available but the use of legally approved herbicides needs to be agreed in advance with NE.			✓			✓	
Reintroduce grazing into Inclosures or plantations where open forest habitats are being restored.						✓	✓
Control Ragwort on the Open Forest to protect forest livestock			✓				
Restore seasonal inundation and natural drainage of wet grassland (streamside lawns) to reinstate winter nutrient deposition and reduce scrub invasion.			✓		✓	✓	✓
Land managers will endeavour to protect Open Forest habitats from uncontrolled wildfire through education programmes and working with Hampshire Fire & Rescue , coordinating efforts with neighbouring landowners to maximise fire prevention measures			✓			✓	
Inclosure Restoration							
The transformation of Inclosures will be managed through the NF Forest Plan process. Private woodlands will generally be managed through FC Approved Woodland Management Plans.						✓	✓
On Crown lands, use FE decision tool to decide on most appropriate ground restoration treatment. Ideally, where areas within Inclosures are to be restored to heathland or mire it is preferable to cut stumps to ground level and remove ridge and furrow and infill drains. As well as improving the habitat restoration community and natural through flow of water, this technique also allows future mechanised habitat management to be effectively employed e.g. bracken/heather cutting and makes stock drifting easier & safer						✓	
Brash may be burnt or removed for biofuel						✓	
Control/remove conifer regeneration						✓	✓
Remove timber crops from areas to be restored to open habitats within Inclosures/plantation woodland. Where areas e.g. mire are too wet to support machinery stems can be left to die naturally from waterlogging, or ring-barked/hand felled if they are more water tolerant species.						✓	
Inclosure fences will be realigned or removed altogether when habitats are at an appropriate stage in development to reconnect trapped pre-Inclosure woodland, mires and heathland to the Open Forest and open areas upto grazing. Seasonal grazing is also an option to help restore/maintain habitats where it is not desirable to remove the Inclosure fencing.						✓	✓
Consideration will need to be given to planning removal of non-native timber crops in the proximity of mature and veteran stands/groups of veterans to ensure trees are not shocked. Haloing may be appropriate.							✓
Restore and diversify the structure of uniform 19C oak plantations to help reconnect open forest old growth woodland, including glade creation and restoration of grazing over time. NE recommend aim should be to develop small glades of between 0.2-0.75 ha in extend with a max of 6 to 8 glades per 10 ha of woodland. All fallen and standing deadwood should be retained or supplemented with felled material where the deadwood resources is lacking.							✓
Retain any veteran/ancient trees							✓
Rides should be kept open and manage as permanent open space.							✓
Where Inclosures are moving towards native/broadleaf woodland conifers will be gradually removed overtime and conifer regeneration controlled. Site specific measures may be required to promote/safeguard broadleaf regeneration and diversification of species and age diversity over time in accordance with UK Forestry Standards.							✓
In key areas it may be appropriate to maintain woodland by coppice, coppice-with standards, high forest rotations of non-intervention depending upon site conditions, character and detailed management objectives.							✓
Wider habitat connectivity							
Restore habitat connectivity across the Perambulation and linkages to the surrounding regions	✓	✓	✓		✓	✓	✓

(ii) Habitat Management Principles (contd)

Other							
Repair erosion to habitats caused by excessive recreational activity where this would benefit the nature conservation interest. There is a presumption against importing material or creating new paths and each scheme must be subject to detailed evaluation and scrutiny.	✓	✓	✓	✓	✓	✓	✓
Collate habitat data and record of work carried out to date	✓	✓	✓	✓	✓	✓	✓
Large scale update/re-mapping of habitats required	✓	✓	✓	✓	✓	✓	✓
Management of access provision for public recreation to ensure no significant damaging effect, for example, implementing recommendations of New Forest Recreation Management Strategy	✓	✓	✓	✓	✓		✓
Management of permitted events (on Crown Lands) to ensure no significant damaging effects.	✓	✓	✓	✓	✓	✓	✓
Maintenance of existing access infrastructure including ,trails, bridges, passageways, gravel roads required for future management of the habitats, stock management and recreational need.	✓	✓	✓	✓	✓	✓	✓