

WOODLAND MANAGEMENT PLAN 2010 - 2029

RFS Battram Wood

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Prepared For:

The Royal Forestry Society

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Appendix 1

- 1a Land Information Search (LIS)
- 1b Magic.gov.uk Search
- 1c NBN Gateway Search BAP Species
- 1d EPS Search (from NBN) & Review of Best Practice Guidelines

Appendix 2

- 2a Crop Type & Constraints Map M88Rv2
- 2b Compartment & First Thin Timing Map M09-1994

Appendix 3

- 3a Compartment Summary
- 3b Thinning Notes Yield / Timing / Frequency

RFS - BATTRAM WOOD

Management Plan

Date (dd/mm/yyyy)	2010	То	2029
Date of last review 1(2.1.3)	N/A		
Owner / tenant	The Royal Forestry Society		
Agent / contact	Robin W. Truslove MICFor CEnv		
Signed declaration of tenure rights and agreement to public availability of the plan ²			

1. Background information

1.1 Location						
	Nearest town, village or feature	Ellistown village (1km to NE)				
	Grid reference	SK 425 093 (eastern boundary access point)				
	Total area (ha)	47.70				

1.2 Description of the woodland(s) in the landscape

The wood forms part of a larger continuous matrix of approx. 150 ha of newly created woodland approx. 10 years old to the south east of Ibstock (including Grange Wood at 62 ha and Workmans Wood at 20 ha). This is becoming a dominant feature in a local landscape previously dominated by coal mining and quarrying. To the south of Battram Wood the former Nailstone open cast colliery has been largely restored but the landform of a large spoil tip resembling a low ridge remains as a permanent feature at its northern boundary which is scheduled for planting to broadleaf woodland as part of the final site restoration. Residents in Battram Road and on the east side of Ibstock and walkers using the good network of local PROW's will see the large area of woodland begin to dominate the skyline between Ibstock and Bagworth.

1.3 History of management

The wood was planted 99% unprotected, over 3 phases in the winters of 1998-99, 1999-2000 and 2000-2001 to arable land (sown with a grass sward) which was undisturbed by mineral extraction. It is possible that deep mine shafts are present under the site as the south side of Battram Road experienced severe subsidence historically.

¹ The plan must be reviewed every five years.

² As owner, tenant or manager, you have the right to manage the wood in accordance with this plan. At least a summary of the management plan must be made publicly available on request.

The wood has been managed by 3 annual herbicide applications and beat up in years 1-3 to achieve strong establishment. Form pruning has been undertaken on timber broadleaves oak, ash and sweet chestnut in broadleaf and mixed crops at least twice since planting. Targeted coppicing of alder has been undertaken every 2 years where in mixture with oak. The small area of existing alder, scots pine, field maple, ash, oak and sycamore woodland in Cpt 16 was thinned in 2007.

Rides have been managed by 2 mows of the central section and 1 of the outer edges annually. Targeted coppice of the linear shrub zone has been undertaken only as required for essential access purposes, due to budget constraints. 7 interpretation signs greet walkers and identify crop types, access routes and biodiversity features. 20 species signs are present at ride side.

A former agricultural irrigation pond in Cpt 12 was cleaned and remodelled in 2008 utilising Leics CC and National Forest Company grant funding to enhance as a habitat for National Forest BAP species.

The trees are very well established with older larch at 10-11m height and Corsican pine at 8-9m. Minor areas of failure were experienced on 1-2% of the site where waterlogging caused larch dieback but these have been restocked with ash or retained as open ground to ensure the 20% provision under WGS is not exceeded. Poplar dieback from leaf rust has been experienced on 30% of Cpt 8 but mixed broadleaves (ash, silver birch, field maple) planted within the matrix on establishment are filling these gaps.

The local community have been involved from the outset, including events as below:

Jan 2000 – 2 planting events in Cpt 4a (oak) and 2c (Millennium Circle of oak and yew). May 2004 – Community work day to build log benches and picnic tables.

July 2004 – Walk in the wood and summer barbecue for 80 local residents.

Nov 2005 – Community planting of a Trafalgar grove of 600 oak in Cpt 4c in partnership with Woodland Trust and Marie Curie Foundation.

Sep 2005 – Seed collecting event in partnership with National Forest Co. and British Trust for Conservation Volunteers.

Feb 2006 - Conservation Volunteers work day (BTCV) to coppice hazel in Cpt 1b.

May 2008 – Brooksby College students work day in Cpt 6 to form prune ash.

Jan 2009 – Ellistown Community Primary School planting event by pond in Cpt 12 and involvement in drawing competition for sign design.

2. Woodland information

2.1 Areas and features

2.1.1 Designated areas	In woodland	Adjacent to woodland	Мар
Special Areas for Conservation (SACs)	-	-	Magic (App 1b)
Special Protection Areas (SPAs)	-	-	Magic (App 1b)
Ramsar Sites (see note on Guidance)	-	-	Magic (App 1b)
National Nature Reserves (NNRs)	-	-	Magic (App 1b)
Sites of Special Scientific Interest (SSSIs)	-	-	Magic (App 1b)
Other designations e.g.: National Parks (NPs), Areas of Outstanding Natural Beauty (AONBs), Local Nature Reserves (LNRs)	National Forest		LIS (App 1a)

Details

National Forest - Full site is within the The National Forest (LIS Search)

FC Quality of Place – The site falls within one of these Forestry Commission zones, selected to tie in with local deprivation indices, where funding for access and biodiversity works are more favourable.

2.1.2 Rare and important species	In woodland	Adjacent to woodland	Мар
Red Data Book or BAP species	Ν	Y	NBN (App 1c)
Rare, threatened, EPS or SAP species	Y	Y	EPS (App 1d)

Details

BAP Species (records of 2km accuracy of smaller covered below) - National Forest BAP

- A *watervole* record is present for the pond just outside the wood to the NE corner of Cpt 8a.
- A *bat* record is present for a location within the developed part of Ibstock village, approx. 1.2km from the site. It is assumed however that bats could be present in mature trees on site and FC guidance on thinning and felling will be adhered to.

EPS

- No sand lizard, smooth snake, dormouse or otter records within 2km of the wood.
- The wood falls within the zone of a GCN record but this is very general as it covers a 2km square area. It is not therefore clear whether GCN are recorded on the site. One pond is present on site in Cpt 12 and one off site adjacent to Cpt 8a. FC guidance on felling and thinning within 100m of these features will therefore be followed.

2.1.3 Habitats	In woodland	Adjacent to woodland	Мар
Ancient semi-natural woodland (ASNW)	Ν	Ν	
Other semi-natural woodland	Ν	Y	Constr's (App 2a)
Plantations on ancient woodland sites (PAWS)	Ν	Ν	
Semi-natural features in PAWS	Ν	N	
Woodland margins and hedges	Y	Y	Constr's (App 2a)
Veteran and other notable trees	Ν	N	
Breeding sites	Ν	N	
Habitats of notable species or subject to HAPs	Y	Y	NBN (App 1c)
Unimproved grassland	Ν	Ν	
Rides and open ground	Y	Y	Constr's (App 2a)
Valuable wildlife communities	Ν	Y	NBN (App 1c)
Feeding areas	Ν	N	
Lowland heath	Ν	Ν	
Peatlands	Ν	Ν	
Others	Ν	Ν	

Details

Other Semi-Natural Woodland – Wet woodland of willow and alder scrub with occasional mature trees surrounds the pond to the NW of Cpt 8a (outside ownership).

Woodland Margins & Hedgerows – Existing field hedgerows retained on planting – managed by siding every 2 years.

Notable Habitats – Pond in Cpt 12 recently cleaned and remodelled as wetland habitat with willows planted adjacent and wildflower meadow sown on adjacent open area.

Rides – Grass rides managed by mowing and flail siding.

Wildlife Communities – Water vole record in adjacent pond by Cpt 8a. 10m stand off will be maintained from this pond for felling, stacking activities. No disturbance will be made to the bank and adjacent marginal scrub vegetation within 4m.

2.1.4 Water	In woodland	Adjacent to woodland	Мар
Watercourses	Y	Y	Constr's (App 2a)
Lakes	Ν	Ν	
Ponds	Y	Y	Constr's (App 2a)
Wetland habitats	Ν	Y	Constr's (App 2a)

Details

Watercourses – A mature stream (Davis Brook) corridor runs east to west between Phases 2 and 3 flanked by thorn hedgerows and some mature willow, sycamore and ash trees which have received H&S tree surgery works in 2008/2009.

Ponds – See notable habitats in section 2.1.3 above.

Wetland Habitats - See Other Semi-Natural Woodland in section 2.1.3 above.

2.1.5 Landscape	In woodland	Adjacent to woodland	Мар
Landscape designated areas	Ν	Ν	
Landscape features	Ν	Ν	
Rock exposures	Ν	Ν	
Historic landscapes	Ν	Ν	
Areas of the woodland prominent from roads	Y		Constr's (App 2a)
Areas of the woodland prominent from settlements	Y		Constr's (App 2a)

Details

Woodland Prominent from Roads – The wood is a developing tree line / woodland frontage from the B582 to the south and from Battram Road to the east.

Woodland Prominent from Settlements – The wood is also a strong feature visible from Battram Village and Ibstock village. The mixed species composition provides a varied and attractive canopy colour through the seasons.

Other – The site lies within the National Forest Landscape Area of the 'Bagworth Industrial Farmland' area of the 'Midland Coalfield' region characterised by arable farmland, extensive views, the industrial presence of the former Nailstone Colliery and an extensive network of high and low voltage powerlines. It also lies within Natural Englands Natural Area **24 'Coal Measures'**.

2.1.6 Cultural features	In woodland	Adjacent to woodland	Мар
Public rights of way	Y	Y	Constr's (App 2a)
Prominent viewing points	Y	Ν	Constr's (App 2a)
Permissive footpaths	Y	Y	Constr's (App 2a)
Areas managed with traditional management systems	Y	Ν	Constr's (App 2a)

Details

PROW – Footpaths, Bridleways and SUSTRANS track shown on Constraints Map.

View Points – Good views are possible along the W-E orientated footpath towards Ibstock Church and the Miners Way footpath looking north to Workmans Wood from the Millennium Circle (Cpt 2c).

Permissive – A sub-loop of the National Forest 10 year anniversary walk 'Birthday Walk' runs through the wood using the existing ride system.

Traditional Management – A 10m wide belt of hazel planting is present at the interface of Cpts 1b / 1c which is coppiced every 3-5 years as opportunities arise to involve local volunteer groups or local hedge laying craftsmen.

2.1.7 Archaeological features	In woodland	Adjacent to woodland	Мар
Scheduled monument	Ν	Ν	
Historical features	Ν	Ν	
Details			

2.2 Woodland resource characteristics

The plantation has been established in 6 main woodland types:

Conifer (16.55 ha) – Comprising pure stands of European Larch, Norway Spruce and Corsican Pine with a mixed stand of Corsican Pine with Douglas Fir in Cpt 14. Small pockets of mixed broadleaves are incorporated at 5% by number to provide habitat and visual diversity to the planting.

Broadleaf - Long Term Retention Fringe (9.55 ha) – A belt of mixed broadleaves 20-100m wide was planted on the margins of the central Phase 2 area and on the more visually exposed boundaries of the wood where field hedgerows were absent with the aim of management by continuous cover to retain a strong woodland boundary into the future.

Broadleaf - New Native Woodland (2.01 ha) – In Cpt 12 planting was established to mimic natural colonisation using randomly distributed clumps and drifts of pure native species.

Mixed (15.32 ha) – The central woodland block comprises mainly one timber broadleaf species in mixture with one timber conifer species i.e. Oak, Sweet Chestnut and Ash in mixture with European Larch, Corsican Pine and Western Red Hemlock. Wild cherry is also present in mixture with Hybrid Larch. Precise mixtures are shown on the attached Cpt summary Table at *Appendix 3a* along with outline 10 year pruning and thinning proposals. In terms of layout, the broadleaves were planted in pure groups of 9-12 amongst a matrix of conifer which includes 1-2 pure rows of conifer every 5 rows. First thinning will therefore be largely systematic.

Poplar (3.97 ha) – 4 clones of Hybrid Poplar planted at 8m final spacing and high pruned. Interplanting of native broadleaves and shrubs included.

Black Poplar (0.30 ha) – Native Black Poplar planted at 8m spacing on a less frequently accessed portion of the site. A National Forest BAP species included for habitat diversity.

The following principles will be applied to the timber resource:

Growth Rate / Yield Class – At this early stage of development, precise yields are difficult to calculate but estimates are provided based on the good growth visible, in the Thinning Notes at **Appendix 3b**.

Thinning Frequency / Timing – First thinning is intended to be early with the aim of achieving maximum growth rate. The model is based on a frequency of 5 years for conifer and mixed crops and 7 years for broadleaf crops as detailed in **Appendix 3a**.

Product Type – It is anticipated that early thinnings of conifer will be saleable for chipwood and potentially small diameter fencing material with later thinnings producing saw log material. Small diameter broadleaf timber will be extracted for firewood where economic and the long term aim is to produce quality timber for beaming and planking purposes.

2.3 Site description

Access – Vehicle access on field gate on eastern boundary, from Battram Road. Hard road extends west from here approx. 650m to western boundary. Remainder of access routes on site are mown grass tracks with scope for upgrade for public and management access purposes.

Windspeed: Average wind speed at 10m agl (above ground level) is 5.1m/s and at 25m agl increases to 5.8m/s. The most exposed part of the site is along the W-E protion of the Bridleway which forms the Green Lane along a low ridge line.

Windthrow Hazard Classification (and score):

Wind Zone – G (score 0) lowest wind speed classification Elevation – 141-190m (score 1) Exposure – No assessment made on site but estimated as moderately exposed (score 3) Soil – Unrestricted rooting in excess of 50cm (score 0) Total Score (4) = **Hazard Class 1 Low**.

Topography: The high point of the site is the Green Lane which runs on westwards from Battram Road, at 155m AOD. The ground slopes down to the stream in the north at 140m AOD and down slightly to the southern boundary at 145m AOD.

Average Annual Rainfall: 30 year average 1961-1990 - 776mm per annum.

Underlying Soil Composition: The site spans two soil types as listed on <u>www.landis.org.uk/soilscapes</u>. To the north of the stream – slightly acid loams and clays with impeded drainage and moderate to high fertility. To the south of the stream – slowly permeable, seasonally wet, basic loams and clays with moderate fertility. Previous use was arable cultivation. The loams and clays of moderate fertility and slower drainage are typical of the lowland Midlands and are suited to a range of tree species.

Bedrock: The full site is underlain by undifferentiated Triassic Rocks including mudstone, siltstone and sandstone.

2.4 Significant hazards, constraints and threats

Hazards

<u>Slope</u> - The ride running north from Cpt 2c, is moderately steep, requiring 4 wheel drive in wet conditions but is fully accessible by forestry machinery.

<u>Services</u> – Underground and overhead services shown on Constraints Map (App 2a). All overhead powerlines were undergrounded in Summer 1999 to avoid conflict with harvesting operations. Poles were retained as raptor perches.

<u>Water Bodies</u> – Stream and pond shown on Constraints Map (App 2a). Contractors and management staff to be made aware of in all instruction documentation.

<u>Mature Trees</u> – Approx. 30-40 present in existing hedgerows – surveyed annually for H&S purposes and remedial works actioned accordingly.

Constraints

<u>Public opinion</u> – Battram village is immediately adjacent to the wood. The publics' participation in events within the wood and their general access use of the site comprising 10,000 plus visits per year is significant. Major harvesting and replanting interventions will therefore need to be communicated through the **'Battram V**illage Group' ahead of time. Users of the wood will need to be warned of felling operations with signage and cordons adjacent to work areas.

<u>FC / DEFRA contract commitments</u> – The site was established with grants from both funding bodies which require the maintenance of the woodland in line with good practice to achieve establishment for 10 and 15 years respectively. An FC Annual Management Grant contract ended in 2009, for the maintenance of signage and permissive access routes. The intention is to apply for a new contract under Woodland Management Grant for 2010-14.

Threats

<u>Disease</u> – The poplar in Cpt 8 have experienced defoliation from leaf rust fungus causing 40% death in Cpt 8c and 10% in Cpt 8b. The interplanting of mixed broadleaves is addressing this failure and ash are coming through strongly. Live poplars will be retained.

Red Band Needle Blight has been confirmed in Cpt 3a by Forest Research but the infection is not severe or widespread at this stage. Proposals are currently being formulated for an approach by heavier thinning on this area alongside enquiries with local chipwood and fencing material buyers.

<u>Vermin</u> – The site is now well established and nearing the point where even moderate deer browsing would have little influence on the growing trees. This situation will be monitored ongoing as succession by natural regeneration will be the preferred method. Grey squirrels are present on site and a report by ADAS in 2007 indicated that minor browsing damage was evident on field maple on the eastern boundary of the site and in the small section of existing plantation woodland as Cpt 16. The trees are now within the vulnerable age range of 10-40 years and the intention therefore is to undertake control by squirrel feed hoppers starting in the 2010 season with associated monitoring of bark stripping damage.

<u>Travellers Trespass</u> – 14 caravans trespassed on the car park and timber stacking areas in September 2007 with a significant cost to the RFS in legal support to remove them and in associated clearance of litter and fly tipping. Funding from the NFC was subsequently sourced to construct a locked height barriers over the car park entrance, place large boulders as vehicle barriers and to plant a hedge, to avoid future trespass without hampering site operations or detracting visually from the site entrance.

<u>Vandalism</u> –Damage to signs is repaired as required under the annual maintenance programme and is minimal. Continued liaison with the village group and local contacts helps the RFS monitor this situation and engenders a local respect and ownership for the wood, in turn avoiding this problem.

3. Long term vision, management objectives and strategy

3.1 Long term vision

For Battram Wood to be an exemplar of multi-objective working forestry in the lowlands to fulfill the RFS remit as a charity to further forestry education.

3.2 Management objectives

No.	Objective
1	To maximise timber quality and growth rate through diligent silvicultural
	intervention by thinning and pruning.
2	To ensure all operations are run economically with a view to minimising running
	costs and maximising income from timber and grant funding.
3	To maintain existing access facilities and wildlife habitats and review opportunities
	for enhancement where funding allows.
4	To explore options to further the knowledge of farm woodland management in the
	forest industries, community and educational establishments.

3.3 Strategy

The over-riding intention across the silvicultural mixtures is to actively manage them to the best of their potential in timber production by a regular thinning and pruning regime.

There is no requirement for zonation of the site based on the stated objectives as these are not mutually exclusive. Whilst permissive access is generally focussed to the system of mown grass rides, it is allowed on foot across the whole site so the public will be able to see first hand the harvesting, access management and habitat management works.

Early thinnings will be sold standing where possible to reduce administrative costs on these lower value products. The attached Cpt Summary at Appendix 3a details thinning timings but where two compartments can be brought into the same year and operation for marketing purposes, this will be undertaken where the tree growth, health and quality are not compromised.

3.4 Woodfuel initiative

Would you be interested in receiving information on funding opportunities for the purchase of harvesting machinery or wood fuel boilers?

Yes / No (delete as appropriate)

4.1 Silvicultural systems

4.1.1 Harvesting

Assuming the wood is now 10 years old, a full breakdown of the thinning approach for years 11-20, is provided in the Cpt Summary at **Appendix 3a**. The following general principles will apply.

<u>Mixed</u> - In mixed stands thinning will favour the retention of the straightest, least forked and most dominant timber broadleaf trees. **The broadleaf groups are planted as 'cells'** within a largely square matrix of conifer with rows running in one direction. It will be possible therefore for first thinning to comprise firstly a systematic removal of one row of conifer in every 5-6 rows of trees. A selective thin back into the remaining crop will then allow badly forked or weak trees to be removed also with the overall result of removing 20% of standing volume. The early thinnings will steadily reduce the proportion of conifer within the mixture. Over the 20-30 year period the conifer proportion will continue to decrease dependent on the success of the broadleaf crop. In Cpt 5b and 9a for example, Sweet Chestnut has experienced a higher failure within its mixtures, possibly due to localised waterlogging causing phytopthora root rot. The proportion of chestnut will therefore be managed such that it is lower than of ash in a similar mixture as dead and dying back trees are removed but it is hoped the chestnut will again dominate with the aim of being the primary timber species. It is intended therefore to keep a strong presence of both elements through the period of this plan.

<u>Broadleaf</u> – These crops will be thinned entirely selectively by 20% of standing volume to open up the canopies of the straightest, least forked and most dominant specimens of the timber species Ash, Oak and Sweet Chestnut. The pioneer species such as Birch, Alder and willow will be reduced in proportion as part of the operation. Ensuring a regular spacing of retained trees will be more important on second and subsequent thinnings with the aim of retaining a strong and continuous canopy for the period of the plan.

<u>Conifer</u> – In the majority of cases systematic removal of 1 row in 5 will be undertaken on first thinning to remove approximately 20% of standing volume. Where Red Band Needle Blight is known to be present such as in Cpt 3a, a heavier thin is currently proposed (subject to locating a suitable buyer for the product) based on systematic removal of 1 in 4 rows and in addition to this, selective removal of a further 30% to allow increased air circulation and avoid spread and accumulation of the fungal infection in the canopy.

<u>Thinning cycle</u> – Mixed crops and conifer will be managed on a 5 year thinning cycle and pure broadleaf crops on a 7 year cycle. The New Native Woodland area will be thinned at the same intensity but on a 10 year cycle and the Millennium Circle of oak and yew at a lower intensity of 15% on a 7 year cycle.

4.1.2 Phased felling and restructuring of plantations

(Proposed amendment to guidance – applies to all even-aged woodland 3.2.3)

No felling or restructuring is intended to take place within the period of the plan.

4.1.3 Establishment, restocking and regeneration

All stock are well established. The current area of open ground on site is approximately 14% which is well within that allowable under the Forestry Commission contract of 20%. Should failure occur on specific areas then within the 20% threshold this would be accepted as open ground and managed as glades. Above this then natural regeneration would be managed to allow recolonisation of the gaps.

4.2 New planting

(Proposed additions to guidance to clarify consideration of design impacts etc 3.2.1/3.2.2, to add reference to local native seed zones and FRM regulation 6.3.3)

No new planting is proposed.

4.3 Other operations

(Proposed addition to guidance to clarify acceptable scenarios for conversion to non-forest land 3.5.1)

No conversion to non-forest land is proposed.

4.4 Protection and maintenance

4.4.1 Pest and disease management

(Proposed addition to guidance – if fencing used, take account of impacts on existing users 5.4.2)

Deer - See paragraph 2.4 (Threats) above.

Squirrels – See paragraph 2.4 (Threats) above.

Red Band Needle Blight - See paragraph 2.4 (Threats) above.

Phytophthora Root Rot - See paragraphs 2.4 (Threats) and 4.1.1 (Mixed) above.

4.4.2 Fire plan

A fire plan was produced on initial planning of the site in 1999 and confirms location of water bodies, access points, hard surfaced roads and crop types.

Identifying and Reporting a Fire

No manager is present on the site day to day. A forestry contractor attends the site as approximately 5-10 visits per year of 1-3 days duration and Lockhart Garratt as woodland managers inspect the site 5-8 times a year. The first identification of fire is therefore

likely to be by the general public accessing the site, neighbouring residents / land owners / farmers and relies on them contacting the emergency services on 999 directly. Ongoing liaison with the local residents and the parish group will therefore be an important part of raising awareness to the threat and procedures for first reporting.

The RFS contact number is given on the main interpretation signs at access points so that the emergency services are clear as to the site ownership and can liaise with the RFS to report any incident.

4.4.3 Waste disposal and pollution

Forestry operations will be carried out in accordance with current best practice to minimise the creation of waste. Any such waste generated will be disposed of in a way so as to minimise any negative environmental impact, for example:

- Chemical containers will be returned to suppliers where possible, or disposed of as per label recommendations
- Plant bags will be re-used where possible.
- Tree shelters will be re-used where possible,

No waste of this nature will be tipped within the site, but disposed of at a suitable facility if it cannot be re-used.

In the case of harvesting, pruning and tree surgery arisings the preferred method of disposal will be to cut up and lay low on the woodland floor to minimise handling and processing and return these nutrient slowly to the woodland soils.

4.4.4 Protection from unauthorised activities

As refered to in paragraph 2.4 (Threats) above, access improvement works were undertaken in 2007 at the site entrance (part funded by The National Forest Company), to increase security against vehicle trespass. No trespass has been experienced and fly tipping has been minimal (1-2 small instances) since their installation. The local residents do report back relatively quickly if there are issues with fly tipping or trespass, conferring **an informal 'warden' function to the site.** Ongoing contact with the village group will be important in retaining this mutual trust for reporting and reponse but the local residents do feel a sense of ownership for the site which is extremely valuable in its monitoring.

4.4.5 Protection of other identified services and values (4.1.1)

(Move some guidance from 4.3, add some new guidance)

Utilities

Overhead and underground lines are shown on the attached constraints plan and this information will be made available to all contractors appointed, confirming their responsibilities for protection and reinstatement.

Rationae tenure / SUSTRANS route

The 650m long W-E orientated section of this cycle route which <u>is</u> within the RFS **ownership is designated by Leicestershire County Council as a 'Rationae tenure' meaning** that whilst it is a public road, the RFS retain full ownership and remain responsible for the maintenance of its surface. The intention is to source WIG funding for the maintenance and repair of this route as a forest road to support timber movement operations and machinery access thus preventing them from predjudicing the use of the route by the public.

The public footpaths are shown on the Constraints Plan and will be managed as a mown grass width and all stiles, gates and waymarkers maintained to a good standard.

4.5 Game management

No rearing, shooting or management of game is proposed for the wood given the presence of full public access and the associated H&S risk.

4.6 Protecting and enhancing landscape, biodiversity and special features

4.6.1 Management of designated areas

No designated areas present.

4.6.2 Measures to enhance biodiversity and other special features (2.1.1k and 6.1.1)

(Also addition to guidance to 6.1.1)

(Guidance needs to updated to reflect new deadwood guidance in 6.2.2)

Deadwood Management

Deadwood, both standing and falling, is of enormous conservation benefit. Management will allow for the retention of deadwood where it does not pose a hazard for public safety of personnel working in the woodlands. As a consequence, deadwood standing, fallen or on live trees will be retained wherever possible and brash will generally be left on site to breakdown.

Pond in Cpt 12

The recently enhanced field pond will be managed by the following principles:

- Annual mowing of grass margins in late summer following seeding of wildflower species such as meadow sweet. Retaining rougher areas on approx 50% of the margin and cutting very 2-3 years.

- Cutting of 1/3 of reed on pond shallows every 5-10 years dependent on growth rate.

- Cleaning and removal of silt on 5-10 yearly basis as required to prevent furring of the pond and retain approx 50% open water habitat.

- Coppicing pondside willow planting every 7 years to retain a low shrubby edge.

4.6.3 Special measures for ASNW and SNW

No ASNW or SNW present.

4.6.4 Special measures for PAWS

(Guidance needs to updated to reflect new PAWS requirements in 6.3.2 UKWAS)

No PAWS present.

4.6.5 Measures to mitigate impacts on landscape and neighbouring land (3.1.2)

Long Term Retention Fringe

As detailed in paragraph 2.2 above, this feature will be managed to retain a strong and defined boundary of mature woodland, which will help visually shield any felling operations. It must also be noted here, that there is no current intention to fell within the period of this plan (i.e. remove trees to the extent that restocking is required), only to thin.

For purposes of improved stability in woodland edge trees next to residential properties, the canopy on the central eastern boundary will be thinned more regularly and more strongly.

4.7 Management of social and cultural values

4.7.1 Archaeology and sites of cultural interest

Millennium Circle

The intention in the long term is for this grove of oak and yew to form the central focal point of the wood. Both components will be maintained such that the yew form tall trees arching over the interior paths and the oaks form a higher canopy above this as straight stems of the highest quality.

4.7.2 Public access and impacts on local people

(add reference to H&S consideration and other impacts in guidance to 7.4.2)

As detailed above in paragraph 2.4 (Constraints), the public will be made aware of harvesting operations on site by warning signage and paths will be temporarily diverted away from hazardous or large scale felling as required. The Parish Group will also be informed of larger scale operations with 2-3 weeks notice for purposes of H&S and to confirm the positive influence of the work within the wood which will follow good forestry practice.

Consultation			
Organisation/individual	Date received	Comment	Response/action
Battram Wood Support Group (representatives from Leics CC, NFCo, Staffs CC, RFS Manag. Comm., Lockhart Garratt Ltd)	Feb 2009	Proposals for proactive early thinning of strongly performing crops were discussed on the ground.	The group were generally supportive of the timings suggesting that combining certain cpts should be considered where contracting costs could be reduced and timber volume increased to provide a more viable sale parcel.
Local resident and vermin control contact from early establishment period	June 2009	Appreciated the offer of undertaking the squirrel control works on a contract basis during the May-Aug season but does not have time to implement.	Offered to existing forestry contractor on site who is happy to undertake as part of wider annual management contract.
Forest Research	Autumn 2009	Comments made on options for thinning intensity on Cpt 3b Corsican Pine which have RBNB.	Options currently being considered for 50% thin (part systematic, part selective) to increase air circulation and reduce spread.
Forestry Commission – East Midlands Operations Manager & Leicestershire Woodland Officer	Sep 2009	Happy in principle to accept an application for WPG. Also subsequently for WIG for works to upgrade and enhance public access facilities by stone surfacing of a circular walk path from the car park and for management access on key timber extraction routes. Also potentially for WIG to support a 3 zone ride management system on the good network of paths with strong shrub margins, currently encroaching, to open public access and enhance this edge habitat.	Lockhart Garratt were instructed by the RFS to take forward the production of the WMP and WIG / WMG applications on receipt of approved funding contracts from the FC.
RFS Management Committee	Nov 2009	Proposals for production of this document and options for future grant support were approved.	As above.
National Forest Company	Dec 2009	Offer of funding made by NFC for consultancy time to undertake a community woodfuel study and report, to survey and assess the interest in the local residents for using woodfuel from the site and confirm the funding streams to activate the supply chain and utilise early thinnings.	RFS have initially accepted the NFC offer and await further confirmation of funding and a full project brief to take forward the study in spring 2010.

5.

6. Monitoring plan summary

Objective number, issue or UKWAS Requirement	Indicator	Method of assessment	Monitoring period	Responsibility	How will information be used?
Landscape feature	Prominence in the landscape	Fixed point photography from prominent viewpoint.	Every 10 years	Owner/Agent	Feedback into felling, thinning, planning.
Structural diversity	Structure and regeneration following harvesting and enhancement/ restoration	Fixed point photography. Walkover survey.	Every 5 years. Annually	Owner/Agent	Feedback into planning of harvesting
Game management	No game rearing proposed.	n/a	n/a	n/a	n/a
Public access	Condition of footpath.	Walkover survey of footpath. Note number of visitors seen when on site.	Annually / At site inspections	Owner/Agent	Identification of problems with footpath will facilitate remedial action.
Damage through pests	Squirrel and possible deer damage extent	Survey damage noting areas most effected. Record number culled.	Annually in spring/ summer	Owner/Agent	Feedback into planning for control levels.

(Amendments to guidance – replicable to allow comparison over time 2.3.2b and required scope of monitoring activities 2.3.2c plus annual monitoring related to effectiveness of measures for special areas 2.3.5)

7. Work programmes

7.1 Outline long-term work programme (2015 to 2029)

Compartment	Activity	Year				
or area	ACTIVITY	6-10	11-15	16-20		
1, 3b, 4d, 2d, 2e, 2c, 4b, 5, 6, 7, 9, 10, 11, 12, 13, 14	Thinning	V				
1, 3b, 4a, 4d, 4c, 5, 6, 7, 9, 2b, 13, 14, 16	Thinning		\checkmark			
1, 2a, 3, 4a, 4d, 2d, 2e, 2c, 4b, 4c, 5, 6, 7, 9, 10, 11, 12, 2b, 13, 14, 16	Thinning			\checkmark		

Management Plan Framework

7.2 Short-term work programme (2010 to 2014)

Compartment or	Activity		Year							
area	ACTIVITY	1	2	3	4	5				
1, 3, 9a, 9b	Thinning	\checkmark								
8a, 8b	High Pruning	\checkmark								
5a, 6, 9c, 13, 14	Thinning		\checkmark							
8a, 8c	High Pruning		\checkmark							
-	Thinning			\checkmark						
8b	High Pruning			\checkmark						
4a, 4d, 16	Thinning				\checkmark					
1a, 1c, 9b, 8c	High Pruning				\checkmark					
5b	Thinning					\checkmark				
5a, 6, 9c	High Pruning					\checkmark				

8. Costings (2.2.1)

Outline projected costs and income over plan period. Please read guidance note for further information.

Thinning

The current thicket stage / pole stage crop would be considered of very limited market value and as a result would have to be undertaken at considerable cost to the owner unless grant funding can be secured to help cover these costs.

9. Maps

List all maps here and append to plan.

Map No./Title	Description
App 2a (M88R∨2)	Constraints and Crop Type Map
App 2b (M09-1994Rv0)	Compartment Map & First Thin Timings

10. Thinning, felling and restocking proposals

Applicants seeking funding through the wood fuel initiative for harvesting machinery or wood fuel boilers must indicate the total volume that is to be thinned and felled during the period of this plan, **by completing Table A.**

This section **should not be completed** for any other applications.

All applicants **must** complete **Table B**. where harvesting work is to be undertaken.

<u>Table A.</u>

Species	Total estimated volume to be harvested during plan period (m ³)
Broadleaves	
Conifers	

Table B.

This section must be completed if you wish to gain felling licence approval from the Forestry Commission. The work detailed below should match the proposals set out in the plan.

For details on how to complete the table, please refer to EWGS 4 Woodland Regeneration Grant Guide (PDF 84kb).

Cpt/sub cpt	Area	Area to be worked	Type of felling	% of ar comp	felled ea rising	Type of licence	Change in woodland type	Preferred claim year	Restock species %	Establishment by natural regeneration	Standard proposals	Notes
				BL	CON					%		
	Felling operations within this plan comprise only thinning. Years 1 – 5 shown below.											
4a, 16	0.51	20%	Т	100		U	None	-	n/a	n/a		Thin of broadleaf
1, 5a, 5b, 9a, 9b, 6, 9c	13.36	20%	Т	40	60	U	none	-	n/a	n/a		Thin of mixed crops.
За	2.00	50%	Т		100	U	none	-	n/a	n/a		Heavy thin of CP
3b, 13, 14, 4d	14.55	20%	Т		100	U	none	-	n/a	n/a		Thin of conifer
				Year	s 6-10	shown b	below.					
2d, 2e, 4b, 10, 11, 12,	6.56	20%	Т	100		U	none	-	n/a	n/a		Thin of pure broadleaf
1, 5, 6, 7, 9	15.02	20%	Т	50	50	U	none	-	n/a	n/a		Thin of mixed crops
2c	0.30	15%	Т	50	50	U	None	-	n/a	n/a		Thin yew-oak grove
3b, 4d, 13, 14	14.55	20%	Т		100	U	none	-	n/a	n/a		Thin of conifer
				Years	s 11-1!	5 shown	below.					
4a, 4c, 2b, 16	3.15	20%	Т	100		U	none	-	n/a	n/a		Thin of pure broadleaf
1, 5, 6, 7, 9,	15.02	20%	Т	55	45	U	none	-	n/a	n/a		Thin of mixed crops
3b, 4d, 13, 14,		20%	Т		100	U	none	-	n/a	n/a		Thin of conifer
				Years	s 16-20	0 shown	below.					
2a, 2b, 2d, 2e, 4a, 4b, 4c, 10, 11, 12, 16	9.20	20%	Т	100		U	none	-	n/a	n/a		Thin of pure broadleaf
1, 5, 6, 7, 9	15.02	20%	Т	60	40	U	none	-	n/a	n/a		Thin of mixed crops
2c	0.30	15%	Т	50	50	U	None	-	n/a	n/a		Thin yew-oak grove
3, 4d, 13, 14	14.55	20%	Т		100	U	none	-	n/a	n/a		Thin of conifer

Management Plan Framework

Release Version 2.1 (18 August 2009)

Additional information

Appendix 1 (Searches)

- 1a Land Information Search (LIS)
- 1b Magic.gov.uk Search
- 1c NBN Gateway Search BAP Species
- 1d EPS Search (from NBN) & Review of Best Practice Guidelines

Appendix 2 (Maps)

- 2a Crop Type & Constraints Map M88Rv2
- 2b Compartment Map & First Thin Timings M09-1994Rv0

Appendix 3 (Cpt info)

- 3a Compartment Summary
- 3b Thinning Notes Yield / Timing / Frequency

Appendix 1 (Searches)

1a - Land Information Search (LIS)

1b - Magic.gov.uk Search

1c - NBN Gateway Search - BAP Species

1d - EPS Search (from NBN) & Review of Best Practice Guidelines

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Run Search View Report		Special Areas For Conservation
		National Nature Reserves
		Sites of Special Scientific Interest
		T Ancient Woodland (ASNW)
		Ancient Woodland (PAWS)
		□ Other
		World Heritage Site

You have drawn the following 1 shape(s) :		🔯 🗹 National Forests		
shape2	Area = 47.18 Ha , Grid Ref = SK422095 delete this shape	Rural Productivity Lagging Area Royal Society for the Protection of Birds		
		L ROPD Reserves		



Land Information Search | Report run on 22/12/2009 10:19:31

Area name : shape2

Approximate Area: 47.18 Hectares | Approximate Grid Ref: SK422095 (442228 309505)

The following land designations/areas of interest are located, partially or fully,inside the drawn area and as a result should be considered in any application for a grant or felling licence. Please click here for guidance.

```
Countryside Stewardship Agreements ( DEFRA )
     - WATERSIDE LAND;
Nitrate Vulnerable Zones ( DEFRA )
     - Surface Water NVZ;
Coaffield Communities ( ODPM )
     - Warwickshire;
Woodland Grant Scheme Mk3 ( Forestry Commission )
     - Battram Wood; 14001945; 1,
     - Battram Wood;
                          14001945; 2:
                          14001945; 2;
     - Battram Wood;
     - Battram Wood;
                          14001945; 1;
                            14001945; 1:
     - Battram Wood:
     - Ibstock Grange Farm; 14002455; 1;
      - Ibstock Grange Farm; 14002455; 1;
      - Ibstock Grange Farm; 14002455, 1;
      - Workmans Wood;
                            14002278; 1;
      - Workmans Wood;
                            14002278; 1;
Economic Regeneration Priority Area 2002 ( Forestry Commission )
     - Economic Regen Measure 2002;
Woods for People ( Forestry Commission )
     - SK414094; 76.53 Hectares;
     - SK422094; 47.63 Hectares;
     - SK422100; 22.11 Hectares;
Conservancy Polygons (Forestry Commission)
     - East Midlands;
Walkers Welcome ( Forestry Commission )
      - Battram Wood;
                      14001945: 2
      - Workmans Wood; 14002278; 1;
National Forests ( National Forest Company )
      - THE NATIONAL FOREST;
Quality of Place Priority Areas ( Forestry Commission )
      - East Midlands;
County Boundaries ( Ordnance Survey )
      - Leicestershire County;
Parish Boundaries ( Ordnance Survey )
     - Ibstock CP;
      - Nailstone CP;
Administrative Boundarles ( Ordnance Survey )
     - Hinckley and Bosworth District (B); District,
      - North West Leicestershire District; District;
```

The following land designations/areas of interest are outside the drawn area but are within close proximity and may still affect your application. Please click here for guidance.

Woodland Grant Scheme Mk3 (Forestry Commission)

(check performed on selected feature to within 200 m of your boundary or line)

- Pretoria Road Woodland; 14003045; 1;

Woods for People (Forestry Commission)

(check performed on selected feature to within 8000 m of your boundary or line)

- SK345108;	11,36 Hectares;
- SK348134;	2.39 Hectares;
- SK354139;	2.31 Hectares;
- SK362097;	25.37 Hectares;
- SK370149;	25.43 Hectares;
- SK376098;	11.4 Hectares;
- SK378137:	34.17 Hectares:
- SK379118;	41.91 Hectares
- SK380155	55.75 Hectares
- SK384142	10.99 Hectares
- SK384155	2.54 Hectares:
- SK388100;	11 16 Hectares
- SK388160,	12.64 Hostares,
- 3K300157,	12.04 Hectares,
- SK309100,	7.57 Hectares,
- SK391095;	7.55 Hectares,
- SK397093;	74.80 Hectares,
- SK398163;	6,46 Hectares;
- SK399164;	1.29 Hectares;
- SK400112;	56,71 Hectares;
- SK406120;	8.22 Hectares;
- SK408157;	3.53 Hectares;
- SK411160;	3.71 Hectares;
- SK412164;	6.61 Hectares;
- SK413087;	16.07 Hectares;
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- SK427152; - SK433093; - SK433173; - SK433179; - SK435173; - SK437099; - SK437103; - SK437103; - SK438089; - SK4381711; - SK4430996; - SK441085; - SK441085; - SK441085; - SK441162; - SK441085; - SK445094; - SK445098; - SK459098; - SK459098; - SK464088; - SK464145;	10.99 Hectares; 15.7 Hectares; 3.43 Hectares; 4.76 Hectares; 2.09 Hectares; 3.28 Hectares; 4.51 Hectares; 3.89 Hectares; 3.13 Hectares; 13.16 Hectares; 4.99 Hectares; 10.13 Hectares; 1.8 Hectares; 27.61 Hectares; 6.08 Hectares; 3.53 Hectares; 1.4 Hectares; 3.53 Hectares; 1.4 Hectares; 3.53 Hectares; 1.4 Hectares; 3.53 Hectares; 3.54 Hectares; 3.55 Hectares;
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- SK427152; - SK433093; - SK433173; - SK433179; - SK435173; - SK437099; - SK437003; - SK437103; - SK430096; - SK4430906; - SK4430906; - SK441085; - SK441085; - SK441085; - SK441162; - SK441162; - SK443160; - SK444075; - SK445078; - SK445098; - SK459084; - SK464088; - SK464145; - SK464152; - SK465116; - SK45516; - SK45556; - SK4556; -	10.99 Hectares; 15.7 Hectares; 3.43 Hectares; 4.76 Hectares; 2.09 Hectares; 3.28 Hectares; 4.51 Hectares; 3.89 Hectares; 3.13 Hectares; 13.16 Hectares; 4.99 Hectares; 1.41 Hectares; 4.99 Hectares; 1.51 Hectares; 4.99 Hectares; 1.51 Hectares; 4.99 Hectares; 1.51 Hectares; 5.761 Hectares; 3.53 Hectares; 1.41 Hectares; 1.41 Hectares; 3.53 Hectares; 1.4 Hectares; 3.54 Hectares; 1.4 Hectares; 3.54 Hectares; 3.554 Hectare
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- SK470085;	36,99 Hectares;
- SK470099;	19.24 Hectares:
- SK470155;	35.21 Hectares;
- SK472080;	15.2 Hectares;
- SK473094;	3.8 Hectares;
- SK475066;	8,5 Hectares;
- SK475151;	12.62 Hectares;
- SK476145;	10.96 Hectares:
- SK477092;	40.18 Hectares;
- SK481066;	3.62 Hectares;
- SK482061;	6.66 Hectares;
- SK487130;	6 Hectares;
- SK487149;	15.37 Hectares;
- SK489079;	6.2 Hectares;
- SK489146;	4.61 Hectares;
- SK489150;	4.69 Hectares;
- SK490127;	39.76 Hectares;
- SK493061;	36.6 Hectares;
- SK493104;	2.14 Hectares:
- SK494050;	10.52 Hectares;
- SK494054;	9.75 Hectares;
- SK494106;	1.1 Hectares;
- SK496110;	0.74 Hectares;
- SK497109;	1.1 Hectares;
- SK499063;	8.35 Hectares;
- SK499080;	11.32 Hectares;
- SK501069;	9.91 Hectares;
- SK503110;	14.57 Hectares;
- SK508104;	27.87 Hectares;
- SK510072;	102.62 Hectares;
Felling Licence Ap (check performed or - Sel Fell/Thin	pplications (Forestry Commission) n selected feature to within 200 m of your boundary or line) n (Unconditional); 014/140/04-05;
Walkers Welcome	(Forestry Commission)

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(check performed on selected feature to within 200 m of your boundary or line)

- Pretoria Road Woodland; 14003045; 1;

There may be other areas of interest that will affect your application that this check has not located.

This check was performed against the following : Community Forests; Heritage Coasts; Areas of Outstanding Natural Beauty; National Park Boundaries; National Park Boundaries (Proposed); Countryside Stewardship Agreements; Environmentally Sensitive Areas; Environmentally Sensitive Area Agreements; Less Favoured Areas; Nitrate Sensitive Areas; Nitrate Vulnerable Zones; Common Land; Objective 1; Objective 2; Rural Productivity "Lagging" Areas; Coalfield Communities; Ancient Woodlands; National Nature Reserves; Ramsar Sites; Sites of Special Scientific Interest; Special Areas for Conservation; Special Protection Areas; Woodland Grant Scheme Mk3; EWGS Creation Grant Regional Scoring 2006; Economic Regeneration Priority Area 2002; NW(E) WIG Target Areas; Woods of People; Woods close to People; Conservancy Polygons; Felling Licence Applications; Walkers Welcome; Forest Plans; National Forests; Quality of Place Priority Areas; County Boundaries; Parish Boundaries; Administrative Boundaries; RSPB Reserves; World Heritage Site; Moor Land; Red Squirrel reserves with buffers ; Ancient and Native Woodland grant target areas ; Woodland Creation Priority Areas ; Ancient woodland priority areas; and took 9.359 seconds.

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The following datasets were used to generate the distribution map.

Dataset	Provider	Dataset	Your	Sensitive	Download raw	View	View
	Organisation	Resolution	Resolution	Access	data	Attributes	Recorder
BTO First Atlas of Breeding Birds in Britain and Ireland: 1968-1972.	British Trust for Ornithology	10km	10km	×	×	×	×

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NBN Gateway - 10km Grid Square species data for SK40

Page 1 of 1



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Records for Chiroptera (terrestrial mammal), in the 10km grid square SK40

Records from the dataset Derbyshire & Peak District Protected Species Database (Summary of available records 1970- 2008)

Summary of your access to the dataset Derbyshire & Peak District Protected Species Database (Summary of available records 1970- 2008), provided by Derbyshire (Derby Museum) Biological Records Centre

Dataset Recolution	Marie Danelution	Seculius occord	Devueload rew data	View Allebules	View Records
Contract reconstruct	rua resolution	Genalive Guudes	Download Taw Gate	YIGH AUTIONED	VIEW INDOVIUS
100m	2km	×	\checkmark	×	×
Site name	Gridref	Date Recorded	Date Accur	acy	Sensitive
Site name protected	SK40X	1989	Year		N
Site name protected	SK40E	1988	Year		N
Site name protected	SK40B	1986	Year		N
Site name protected	SK40L	1985	Year		N
Site name protected	SK40R	1984	Year		Ν

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NBN Gateway - 10km Grid Square species data for SK40

Page 1 of 1





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Records for Populus nigra subsp. betulifolia (flowering plant), in the 10km grid square SK40

Records from the dataset Vascular Plants Database additions since 2000

Summary of your access to the	e dataset Vascular Plants	Database additions since 20	000, provided by Botanical So	ciety of the British Isles	
Dataset Resolution 100m	Your Resolution 10km	Sensitive accoss	Download raw data	View Attributes	View Recorder
Site name	Gridref	Date Recorded	Date Accur	acy	Sensitive
Site name protected	SK40	4/6/1981	Day		N

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NBN Gateway - 10km Grid Square species data for SK40

Page 1 of 1



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Records for Hyacinthoides non-scripta (flowering plant), in the 10km grid square SK40

Records from the dataset Vascular Plants Database

Summary of your access to th	e dataset Vascular Plants	Database, provided by Botania	cal Society of the British Isle	25	
Dataset Resolution	Your Resolution	Sensitive access	Download raw data	View Attributes	View Recorder
100m	10km	×	~	×	×
Site name	Gridref	Date Recorded	Date	Accuracy	Sensitive
Site name protected	SK40	13/10/1996	Day		N
No site name available	SK40	Between 1950 and 1999	Year	Range	N
SK40	SK40	1995	Year		N

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Records for Lutra lutra (terrestrial mammal), in the 10km grid square SK40

Records from the dataset Mammal records from Britain from the Atlas of Mammals (1993), with some subsequent records

Summary Records C	of your ac Centre	cess to the c	lataset Mamn	hal records f	rom Britain fi	rom the Atlas o	of Mammals (199)	3), with some	e subseque	nt records, provideo	by Biological
Data	sei Resoli	illion	Your Reso	ution	Sensitive	access	Download ray	v data	View A	thributes V	ew Recorder
	100m		Full		×		\checkmark		•	1	\checkmark
Site name	Gridref	Date Recorded	Date Accuracy	Sensitive	Recorder	Determiner	VICECOUNTY	STATUS	SOURCE	NBN_COMMENT	RECORDTYPE
Market Bosworth	SK4103	No date available	No date	N	Clements, H.A.B.	Unknown	Leicestershire (with Rutland)	Unknown	Unknown	No date with record	11

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National Biodiversity Network 2008.

REDSTART



The following datasets were used to generate the distribution map.

Dataset	Provider Organisation	Dataset Resolution	Your Resolution	Sensitive Access	Download raw data	View Attributes	View Recorder	
BTO First Atlas of Breeding Birds in Britain and Ireland: 1968-1972.	British Trust for Ornithology	10km	10km	×	×	×	×	

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RUDDY DARTER DRAGONFLY



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The following datasets were used to generate the distribution map.

Dataset	Provider Organisation	Dataset Resolution	Your Resolution	Sensitive Access	Download raw data	View Attributes	View Recorder
Dragonfly (Odonata) species records up to 1997 held by Leicestershire Environmental Resources Centre	Leicestershire and Rutland Environmental Records Centre	100m	1km	×	×	×	×
Dragonfly records from the British Dragonfly Society's Dragonfly Recording Network for the period up to 2008	Dragonfly Recording Network	100m	1km	×	×	×	×

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D National Biodiversity Network 2008

Review of best practice guidelines for Battram Wood (SK422 099)

19-05-08

Otter



Results:

As the site is within the known range of otters, an NBN search for this species will be completed.

Great Crested Newt

(Triturus cristatus)



Results:

As the site is within the known range of great crested newts, an NBN search for this species will be completed.

Dormouse



As the site is within the known range of dormouse, an NBN search for this species will be completed.

Smooth Snake

(Coronella austriaca)



Results:

As the site is outside of the known range of the UK smooth snake population, an NBN search for this species will not be completed.

Sand lizard (Lacerta agilis)



Results:

As the site is on the edge of the known range of the UK sand lizard population an NBN search for this species will be completed as a precaution.

NBN Gateway search results for Battram Wood (SK422 099)

Otter (Lutra lutra)



Results; 5 records found;

None of the records revealed by the search were located within 2kms, or the same 10km grid square as Battram Wood (SK40).

Full breakdown of results Appendix 1, Sheet 1

Great Crested Newt (Triturus cristatus)



Results: 31 records found.

Record Name;

Although many of the records found by the search were geographically non-specific and so it was not possible to say with certainty whether or not the GCN recorded at these sites are within 2km of the wood, several notable records found by the search are discussed in detail below (see Table 1).

Table T				
Мар	Site Name	Grid Reference	Date Recorded	Source
map	Bardon Hill	SK41	1965	Literature
		SK41	Between 1650 and	
map	Charnwood Forest		1945	Field
map	IBSTOCK RAVENSTONE RD	SK41	1985	Field
map	Ibstock,14 Ravenstone Road	SK41	1985	Field
map	Markfield,9 Jacqueline Road	SK41	1985	Field
map	Markfield,Jacqueline Road	SK41	1985	Field
map	Markfield	SK41	1980	Field

Notable GCN record review

The record entitled 'Bardon Hill' is likely to refer to the industrial estate located on the western edge of Coalville. This site occupies a relatively large area (approx. 100ha) and lies approximately 3km north-east of the wood,

Charnwood Forest is located more than 10km south-east of Battram Wood.

The two GCN records which relate to the village of Ibstock (IBSTOCK RAVENSTONE RD, 'Ibstock,14 Ravenstone Road) may be within 2kms of the wood, as the village is located approximately 1.75km north-west of the wood. (See Aerial Photo 1 below)

The town of Markfield is located approximately 6km east of Battram Wood. The three records which reference this location (Markfield,9 Jacqueline Road, Markfield,Jacqueline Road, Markfield) are unlikely to fall within 2kms of Battram Wood.

Full breakdown of results is available in Appendix 1, Sheet 2.

Aerial Photo 1 – Village of Ibstock with accompanying 2km buffer. Note that parts of Battram Wood are within 2kms of the village.



Dormouse (*Muscardinus avellanarius*)



Results; 0 records found.

The search did not reveal any dormouse (Muscardinus avellanarius) records within 2km of Battram Wood.







The search did not reveal any sand lizard (Lacerta agilis) records within 2km of Battram Wood.

Appendix 2 (Maps)

2a - Crop Type & Constraints Map - M88Rv2

2b - Compartment Map & First Thin Timings - M09-1994Rv0



		27.2.2			
	Sustrans track (bridleway)		Stream	CP DF	Corsican pine Douglas fir
LOCKHART	Other rides		Conifers		European Iarch Hybrid Iarch
GARRATT	Compartment boundary		Existing woods	WRC POP	Norway spruce Western red cedar Poplar Plack peplar
TREE & ENVIRONMENTAL CONSULTANTS 8 MELBOURNE HOUSE: CORBYGATE BUSINESS PARK: WELDON: CORBY: NORTHANTS: NN17, 516	Subcompartment boundary		Broadleaves	POK FM	Pedunculate oak Field maple
TEL: 01536 408840 FAX: 01536 408860	Overhead lines		Mixed	MB AH	Mixed broadleaves Ash
TITLE: LAYOUT & CONSTRAINTS PLAN	→ → Underground cables		New native woodland	SCH WCH	Alder Sweet chestnut Wild cherry
PROJECT/SITE: BATTRAM WOOD	Existing field hedgerows	-	Poplar	HAZ	Hazel
	Public bridleway				
ROTAL FORESTRT SOCIETT	Public footpaths	ARADLE	Aujacent land use		
REF: 088/C01/M88 REVISION: 2	• • • • •National Forest Birthday Walk loop (permissive)	EWBOLDS	Land ownership		
SCALE: DATE:	Croon long (rationed tonurg)	Reproduced w	ith the permission of The Controller of Her M mber: AL 52281A000 Lockhart Garratt Ltd 8	ajesty's Statio Vielbourne Ho	nery Office Crown Copyright
1:4,000 23/12/09	& Sustrans cycle route	Park, Weldon, without the per	Corby, Northants NN17 5JG. For identification mission of Lockhart Garratt Ltd.	on purposes of	nly. Not to be reproduced
Produced by: ACB Checked by: RWT	 – – – Green-lane (rationae tenure) 		www.lockhart-ga	rratt.o	co.uk



441600 00000	441800 00000	442000 000000	442200 000000	442400 000000	442600	442800 000000
TREES • WOOD 8 MELBOURNE HOUSE: WELDON: CORBY: TEL: 01536 4088	CKHAR RRAT LAND • FORESTR CORBYGATE BUSINESS PARK: NORTHANTS: NN17 5JG 40 FAX: 01536 408860	Legend	Application area Compartment boundary Sub compartment boundary			
WPG AF	PLICATION	* *				
PROJECT/SITE: BATTR	AM WOOD	2012	First thin timing (calendar year)			
CLIENT: ROYAL FOF	RESTRY SOCIETY					
REF: 088/D01/M09 19	994 REVISIC	DN: 0				
SCALE:	DATE:				(c) Licence number: AL 52281A000 Lockhart Ga	er of Her Majesty's Stationery Office Crown Copyright rratt Ltd 8 Melbourne House, Corbygate Business
1:5,000 @ A3	26/10/09				Park, Weldon, Corby, Northants NN17 5JG. For without the permission of Lockhart Garratt Ltd.	Identification purposes only. Not to be reproduced
Produced by: SM	Checked by: R	NT			WWW.LOCKHAR	T-GARRATT.CO.UK

Appendix 3 (Cpt info)

3a - Compartment Summary

3b - Thinning Notes - Yield / Timing / Frequency

RFS BATTRAM 2009-2029 WOODLAND MANAGEMENT PLAN CPT SUMMARY

REF: 09-2693 221209 088 D01 R

* Shrub percentages given for long term retention fringe are by plant number i.e. extra shrubs were planted for dense understorey.

In Cpt's 2 and 10 broadleaf trees were planted at a density of 1100 sph to ultimately acheive a full broadleaf canopy.

						-			Budget Yr						
Phase	Cpt	Area	Plant No.	SPH	Spacing	Туре	Tree Species % (by number planted)	Shrub %	1st Thin	2nd Thin	3rd Thin	4th Thin	5th Thin	1st High Prune	Year 11-20 Approach
	1a	1.20	2,260	2,250	1.8 x 2.4	Mixed	POK (35%), MB (6%), EL (46%)	13%	12	17	22	27	32	15	Thin to open best POK primarily and thin favour strongest EL in the centre of EL groups. Alter POK:EL ratio from 0.75:1 to 2:1.
	1b	0.80	1,695	2,250	1.8 x 2.4	Mixed	SCH (32%), EL (42%), MB (5%)	21%	12	17	22	27	32	-	Retain only best SCH given dieback. Alter SCH:EL ratio from 0.75:1 to 0.5:1. Poss line thin.
	1c	1.05	1,995	2,250	1.8 x 2.4	Mixed	AH (34%), EL (44%), MB (5%)	17%	12	17	22	27	32	15	AH showing poorer early form but still enough good trees to work with so retain proportions for the period.
1	2a(n)	1.15	3,765	2,250	2.1 x 2.1	Broadleaf	SLI (7%), POK (19%), HB (4.5%), SB (4.5%), SYC (4.5%), ROK (2.5%) WCH (2%), MB (11%)	45%*	20	27	34	41	48	-	Slightly lower proportion of timber species POK, SYC, WCH (total 26%). Favour oak as long term species. Later thin as less competition from fast growing
(P-Jan '99)	2a(s)	0.70	2,110	2,250	2.1 x 2.1	Broadleaf	SLI (6%), POK (16%), HB (4%), SB (4%), MB (17%)	53%*	20	27	34	41	48	-	
	3a	2.00	4,085	2,250	1.8 x 2.4	Conifer	CP (83%), MC (4%), MB (4%),	9%	12	16	21	26	31	-	Early thin given high yield and to avoid red band needle
	3b	2.20	4,125	2,250	1.8 x 2.4	Conifer	EL (81%), MC (5%), MB (4%)	10%	12	17	22	27	32	-	Thin early as larch yield high.
	4a	0.35	785	4,440	2.1 x 2.1	Broadleaf	WILDSTAR CHERRY (44%), WCH	12%	15	22	29	36	43	18	Good height growth and good form in response to 2005
	4d	1.20	2,335	4,440	1.5 x 1.5	Conifer	NS (72%), MB (3%)	25%	15	20	25	30	35	-	Thinned year 9 and 10. Thin again year 15. Diversify stand by opening small gaps over broadleaf regeneration.
	8a	0.70	200	280	8 x 8, 2 x 2	Poplar	Hybrid Pop (20%), AH (9%), ALD (9%), BIR (13%), Other (9%)	40%	-	-	-	-	-	12,13	No thinning. Prune for further 2 years to achieve 6-7m clear stem
	Sub-total	11.35	23,355												
	2d & 2e	1.85	5,250	2,250	2.1 x 2.1	Broadleaf	AH (11%), POK (13%), SCH (8%), SLI (6%), MB (25%)	37%	21	28	35	42	49	-	POK, AH, WCH (total 32%). Favour oak and ash as long term species in this continuous cover retention belt.
	2c	0.30	353	2,250	2.1 x 2.1	Mixed	POK (50%), YEW (50%)	0%	21	28	35	42	49	24	Lower intensity thinning to retain strong feature.
	4b	0.32	768	2,250	2.1 x 2.1	Broadleaf	POK (90%)	10%	21	28	35	42	49	24	Focus on quality stems with high pruning
	4c	0.28	672	4,440	1.8 x 1.8	Broadleaf	POK (90%)	10%	23	30	37	44	51	27	P2005 trafalgar oak at closer spacing
	5a	1.66	3,215	2,250	1.8 x 2.4	Mixed	POK (35%), EL (48%), MB (5%)	12%	13	18	23	28	33	16	Thin to open best POK and strong EL in the centre of groups. Alter POK:EL ratio from 0.75:1 to 2:1.
	5b	1.53	2,740	2,250	1.8 x 2.4	Mixed	SCH (35%), DF (47%), MB (5%)	13%	16	21	26	31	36	-	Favour best trees of either species for a healthy crop foremost, given dieback on SCH & poorer form on DF.
	6	2.12	4,455	2,250	1.8 x 2.4	Mixed	AH (46%), EL (41%), MB (5%)	8%	13	18	23	28	33	16	Thin to open best AH primarily and favour strongest EL in the centre of EL groups. Alter AH:EL ratio from 1.1:1 to 2:1.
2	7	1.66	3,490	2,250	1.8 x 2.4	Mixed	AH (44%), WRC (40%), MB (6%)	10%	17	23	28	33	38	20	Thin to open best AH and retain only strongest WRC given poor form and growth.
(P- Jan'00)	8b	0.94	562	625	8 x 8, 2 x 2	Poplar	Hybrid Pop (20%), AH (9%), ALD (9%), BIR (13%), Other (9%)	40%	-	-	-	-	-	12,14	No thinning. Prune for further 2 years to achieve 6-7m clear stem. Remove dead stems also.
	9a	1.60	3,000	2,250	1.8 x 2.4	Mixed	SCH (35%), CP (47%), MB (5%)	13%	12	17	22	27	32	-	Retain best SCH and clean dead stems. Increase proportion of CP slightly.
	9b	2.10	3,285	2,250	1.8 x 2.4	Mixed	AH (36%), CP (48%), MB (6%)	10%	12	17	22	27	32	15	AH growing well alongside CP. Reduce CP presence slightly. AH:CP ratio from 0.7:1 to 1:1.
	9c	1.30	2,520	2,250	1.8 x 2.4	Mixed	WCH (31%), HL (46%), MB (7%)	16%	13	18	23	28	33	16	Thin to open best WCH primarily and favour strongest HL in the centre of groups. Alter WCH:HL ratio from 0.66:1 to 1:1.
	10	1.45	2,285	2,250	2.1 x 2.1	Broadleaf	POK (9%), AH (7%), SLI (4%), SCH (4%), ROK (4%), MB (24%)	48%*	20	27	34	41	48	-	Slightly lower proportion of timber species POK, AH, SCH (total 20%). Favour oak and ash and reduce SCH. Later thin as less competition from fast growing species.
	11	0.93	1,465	2,250	1.8 x 2.4	Broadleaf	POK (40%), ALD (36%), MB (7%)	17%	20	27	34	41	48	23	Retain proportions opening best form trees gradually. Coppice intervention on alder every 2 years.
	12	2.01	1,730	1,600	2.5 x 2.5	Broadleaf	POK (23%), BIR (23%), CRAB (8%), ROW (8%)	38%	20	30	40	50	60	-	Thin to ensure best development of long term species and retain open and varied structure
	Sub-total	20.05	35,790	0.050	21.01	Proodlest	DOK (25%) SII (00/) HD (60/)	450/*	22	20	26	40	EO		25% timber species
	2D 8C	2.36	5,257 1,466	625	8 x 8, 2 x 2	Poplar	Hybrid Pop (22%), AH (9%), ALD (9%), BIR (13%), Other (7%)	40%	-	-	-	-	-	- 13,15	No thinning. Prune for further 2-3 years to achieve 6- 7m clear stem. Remove dead stems also.
3 (P-	13	2.81	5,119	2,250	1.8 x 2.4	Conifer	CP (63%), EL (5%), WRC (5%), MB (11%)	16%	13	18	23	28	32	-	Retain proportions dependent on continued good performance of all species.
	14	8.34	16,479	2,250	1.8 x 2.4	Conifer	CP (44%), DF (26%), MB (12%)	18%	13	18	23	28	32	-	DF performing less well. Alter CP:DF ratio from 1.7:1 to 2:1.
	15	0.30	141	625	8 x 8, 2 x 2	Broadleaf	Native Black Poplar (21%), MB (37%)	42%	-	-	-	-	-	-	Retain poplars as open grown trees.
	16	0.16	25 yea	ar old pla	ntation	Broadleaf	ED (10%), MD (20%)	10%	15	22	29	36	43	-	Thinned in 2006 - existing plantation.
	TOTAL	47.70	28,462												

For reference:

Budget Year	1	2	3	4	5	10	12	13	14	15	16	17	21	22	26	27	31
Calendar Year	1999	2000	2001	2002	2003	2008	2010	2011	2012	2013	2014	2015	2019	2020	2024	2025	2029
Outline Work Prog Year (Section 7)	-	-	-	-	-	-	1	2	3	4	5	6	10	11	15	16	20

App 3a - RFS Battram WMP - Cpt Summary & Thin Timing.xls

RFS BATTRAM 2009-2029 WOODLAND MANAGEMENT PLAN THINNING NOTES - YIELD / TIMING / FREQUENCY REF: 09-2693 221209 088 D01 R

	F	C Yield Data	a	Savill	1998		
	Height at 1st thin	1st Thin Timing	Spacing nearest that at Battram	Aver UK YC	Max UK YC	Estimated YC	Anticipated 1st Thin Age
CONIFER							
EL"	9.6	13	1.7m	7-11	14	12	12
HL"	7.8	13	2.1m	7-11	14	12	12
CP"	8.3	15	2m	9-13	20	16	11
NS"	8.1	21	1.5m	10-13	22	12	already thinned
DF*	no data	27	2m	10-15	24	10	15
WRC*	no data	28	1.5m	12-24	-	12	16 (with AH)
BROADLEAF							
POK*	no data	28	1.2m	3-5	8	6	20
AH*	no data	17	1.5m	4-6	10	8	16
SCH		no data		8	no data	4-6	with conifer
WCH		no data		6-10	no data	9	14

Data source:

" - FC Booklet 48 - Yield Models for Forest Management

* - FC Booklet 54 - Rollinson (1985)

First Thin Timing

The following thinning timings are advanced based on avoidance of excessive root competition:

- Larch thin timing to be taken as Year 12
- **Pine** thin timing to be taken as Year 11 given additional preference to reduce canopy humidity and avoid Red Band infection.
- Norway Spruce already thinned at Year 9 and 10 so next thin at Year 15
- Douglas Fir first thin at Year 15
- Western Red Cedar present principally in mixture with ash and showing very columnar form year 16
- Oak first thin to be taken as Year 20
- Ash first thin at Year 16
- Sweet Chesnut present principally in mixture with conifer and performing poorly so thin when tackling conifer
- Wild Cherry has a preference for early thinning to allow full and unimpeded crowns Year 14

Thinning Frequency

- Conifer should be thinned on a 5 year cycle after first intervention
- Broadleaf should be thinned on an 7 year cycle after first intervention
- Mixtures should be thinned based on the need to remove conifer i.e. a 5 year cycle
- Thinning intensity of 20% standing volume to be applied unless stated otherwise on Cpt summary