English Woodland Grant Scheme

Forestry Commission England

Date April 2010

East England: Grant support for deer management

Background

This document is to give guidance on support for deer management in the East of England Region. The annual cost of deer to the overall economy in the East of England is estimated to be between £7 million and over £10 million, for example due to road traffic accidents. There is also a loss in biodiversity of woodlands across the region resulting from over browsing; this provides the rationale for the Forestry Commission helping fund the management of deer.

Funds are limited and eligible applications will be judged on a first come first served basis. The effectiveness of this funding package will regularly be reviewed and revised accordingly.

What woodlands are eligible?

All other EWGS eligibility requirements apply. We will fund deer management where it is required in order to maintain and improve the environmental value of the woodland. Owners who wish to apply to the FC for grant support will need to discuss their deer management issues with their local woodland officer.

What can be funded?

Woodland Assessment Grant (WAG)

A Deer Management Plan (DMP) can be funded using WAG ecological assessment; this is at £5.60/ha with a minimum payment of £300. The DMP must use the template devised by the Deer Initiative. This is available from http://www.thedeerinitiative.co.uk/html/downloads.htm or speak to your local woodland officer, for contact details go to: http://www.forestry.gov.uk/forestry/infd-7b7ezj

When the plan is completed, a copy must be submitted with the claim form to ensure the FC is satisfied with its contents. The FC works closely with the Deer Initiative and may seek their advice before approving payment.

Woodland Improvement Grant (WIG)

The FC will not consider any WIG claim for deer management related work until there is an agreed DMP in place.

Any WIG work relating to deer management that you intend to undertake must have been identified in the DMP for the woodland. E.g. purchase of High Seats.

Many WIG standard costs can be applied to support the management of

deer in woodland. ‘Operations Note 009 – Standard Costs’ lists all the woodland management work that FC will fund, this is available on the FC website at: http://www.forestry.gov.uk/forestry/infd-6kxfq5

Some of the applicable costs are:
C6 Deer High Seat
F4 Deer Fencing
F5 Temporary Deer Fencing
F6 Deer & Rabbit Fencing
L1 Forest Craftsman
L2 Forestry Agent
V4 Open Ground Tree & Scrub manual cutting >7cm dbh (for ride widening/sight lines)

Of particular note is the potential to help fund deer stalking. The FC are prepared to offer standard cost L1 (labour rate – forest craftsman) This will be applied at one stalker-day per hectare per year for the first 30ha of woodland. Any further area, up to 100ha will be paid at the lower rate of half a day per hectare per year. For example for a 60ha woodland we would be prepared to fund up to 45 stalker days per year.

Woodland holdings over 100ha will need to be discussed with your local Woodland Officer to agree the correct funding package.

Where the L1 payment is applied for deer stalking, deer impact and activity must be monitored. This must be undertaken each year to help determine the success of deer management. This should follow Impact and Activity Scoring System (see appendices A and B). The FC are prepared to fund this using standard cost L2 (labour rate - forestry agent). The number of hours paid will be 4hrs per year where the whole woodland holding is less than 30ha and 8hrs per year for 30ha or more

Deer cull records must be maintained on an annual basis these should be based on the ‘Deer Cull Data Record’ from which is shown at appendix C

The rate of grant eligible against the standard cost will be either 50 or 80%. Your woodland officer will advise you which rate applies.

Appendix A

Deer Impact and Activity
Scoring Method

Scoring for deer and their damage

Background

Deer score is a simple measure of their activity. Damage score is a measure of their effects on vegetation in the recent, or more distant, past. Over a sample of woods, the two scores are positively related – as deer score increases, so does the damage score. However, for any given deer score, damage score may vary from wood to wood.

The technique is subjective in that most signs are scored based on experience rather than by quantitative measurement. In order to use it successfully, experience and/or training is necessary, and it is important to stress that two observers are unlikely to derive scores that are exactly the same without considerable prior collaboration. However, some quantification has been introduced and this will be developed further. In the meantime, accept that your scores may not be the same as your colleagues', but this does not matter providing they are for your own personal use and you score in a consistent manner.

The method was developed specifically for muntjac and their damage. However, it is applicable to other species of deer with minor modifications. It is, for instance, relatively easy to produce separate scores for muntjac and fallow deer where they occur together in a wood, because signs for the two species can be readily differentiated. Deriving a muntjac damage score in woods where there is a high density of fallow deer can be problematical because feeding by the larger species may mask muntjac activity.

Method

Typically a wood is visited for 1-2 hours. Do not simply stick to rides – walk into woodland blocks, coppice areas etc, looking for signs. Deer scores are based on recording in the field four variables: deer, droppings, slots and paths. Signs can be counted where appropriate (e.g. for deer, groups of droppings, paths). Written descriptions of all signs, together with these tally counts, enable scores to be derived with each variable being scored 0 (if not recorded), 1, 2 or 3. The overall deer score therefore comprises four components, each being scored from 0 to 3, and so the overall score will be between 0 and 12. Damage scores are based on recording five variables: browsing on woody vegetation, breakage of woody stems, browselines, fraying, and grazing on ground flora. Each variable is again recorded and scored in the same way between 0 and 3. Overall damage scores are summed as for overall deer scores and can vary from 0 to 15. Specific information on signs is given below.

Scoring can be done at any time of year, but spring and early autumn are preferred. In the spring, signs such as slots and paths are especially evident, and signs of feeding on new growth as well as on that from the previous year may be apparent. Scoring in autumn before leaf-fall means there is abundant vegetation to observe, although the ground may be hard after a dry summer, and so slots and paths are less visible.

Although 1-2 hours is normally recommended for a single visit, this can be adjusted to suit the circumstances. Keeping detailed notes as well as deriving scores is essential when monitoring a wood over time or when comparing between woods. In a small wood (say <10 ha), you should

usually walk round twice during a visit of at least one hour, but in different directions. The longer one spends in a wood, the more likely signs are to be recorded ie breakage might score 0 after one hour, but 1 after a longer period if it is rare. Therefore, when scores are being compared, it is essential that roughly the same amount of effort is involved. Some damage signs can persist for years, and it is useful to record whether they are recent.

Where a wood is being scored each year as a monitoring exercise, scoring should, if possible, be done consistently at the same time of year. Similarly, keeping detailed notes as well as deriving scores can be useful when monitoring a wood over time or when comparing between woods.

While scoring will help you monitor differences or changes, if there are specific concerns at a site, it is important that they are directly addressed. For instance, if orchids are at risk, then they should be monitored in addition to scoring.

Deer activity signs

Deer: Record numbers of deer encountered including those heard and remains/hair found, and calculate the number of encounters per hour. As a guide: for muntjac and roe 0.5-2.5 encounters per hour would score 1; 2.5-6.5 per hour would score 2; while more than 6.5 would score 3. Numbers of the larger herding species seen are much less likely to be a reliable indication of abundance, but for fallow, sika and red deer encounter rates of 1-6 per hour could score 1, 7- 16 per hour score 2 and 16+ score 3.
You should keep a note of other species such as rabbits, hares and wild boar, as these species are also likely to cause adverse impacts to woodlands.

Droppings: Look for droppings, for scrapes (with or without droppings) and for latrines throughout woodland. Dung decay rate is affected by weather, the type of habitat and food eaten. If unfamiliar with the shape and size of dung of different species, please consult a reference book. As a guide: 1-6 pellet groups per hour would score 1; 6-16.5 would score 2; and more than 16.5 would score 3. Record the number of locations where droppings of other species such as rabbits are found.

Slots: Look for evidence of slots throughout the woodland and outside, taking into account slots in all areas, including on rides, deer paths and boundary banks. Look particularly in patches of mud, or where deer have had to scramble up banks or across ditches. Look if possible after rain. Some substrates (e.g.sand) tend not to show slots. If unfamiliar with the size and shape of slots of different species, please consult a reference book.

Paths: Look for deer paths (also called track-ways or racks) crossing rides and woodland boundaries. Check for networks inside the woodland blocks. Deer species responsible for paths might be determined from slots, droppings, height of adjacent browsed vegetation, size of tunnels etc. Try to distinguish badger paths. Judge both path frequency and extent to which they are used. Decreasing deer density may be associated with a reduction in use rather than a reduction in frequency of paths (see Section deer paths). For less than 2 tracks per 100 m score 1, 2-5 per 100 m score 2 and more than 5 per 100 m score 3.

Deer damage signs

Browsing on woody vegetation: Browsing on shrubs such as privet, hawthorn and blackthorn should be recorded. Also, coppice regrowth should be checked – typically coppiced hazels in managed coupes have c20 tall stems per stool if unbrowsed. Expected growth rates for ash and hazel regrowth stems are up to 2 metres in the first year. Sallow/willow may grow even higher. Levels of browsing on new coppice regrowth can be quantified but sampling should be objective. Look for characteristic bitten leaves on bramble – are bushes defoliated, is there die-back and are bramble seedlings browsed? Are tree seedlings browsed? Can you find saplings up to 2 m in height for common tree species (they grow much more slowly than coppice regrowth)? Look also for browsing on basal shoots at the base of standard trees. Try to assess species responsible for the browsing from height of browse line (muntjac 1 m, roe 1.2 m, fallow 1.5 m).
Check for shrubs shaped e.g. by fallow. Shaping by muntjac might produce a ‘waist’ on a shrub.

Breakage of woody stems: Deer break tall stems by biting them to bring the tips down to a height at which they can be defoliated. Muntjac breakage usually occurs at heights between 40 and 100 cm, and on stems 2-10 mm thick. Look for breakage with the top part still attached (or on the ground) on coppice regrowth, privet, elder, blackthorn suckers and other stems that are no thicker than 1 cm at a height of 1 m. Old breakage can be recognised for years. Unless there is a very dense muntjac population, recent breakage may be hard to find. If a deer population is reduced from high to moderate density, there might be a large reduction in breakage. Roe typically break coppice regrowth stems between 70 and 130 cm, while fallow usually break at heights greater than 1 m and on thicker stems. Rabbits will occasionally break stems, but at heights of less than 50 cm and with sharper bites; and hares sometimes 'fell' thin stems:

Browse lines: Heavy browsing causes browse lines. For muntjac, these are at a height of about 1 m e.g. on bramble, look for defoliation of thickets or evidence of browse lines on trailing stems. Other species produce browse lines at different heights: roe 1.2 m, fallow 1.5 m, red deer higher than 1.5 m, rabbit 0.5 m, hare 0.7 m. Check especially honeysuckle, privet and ivy growing on trees – also individual shrubs such as hawthorn, blackthorn and field maple. Check for the occurrence of general browse lines; if present, how obvious and widespread are they? Note that deer of all species can browse higher when standing on their hind legs. Also, occasionally one deer may pull on a trailing stem allowing another to browse higher than normally possible. Deer will also climb on stumps or logs to feed higher. Larger deer may mask browse lines of smaller deer.

Fraying: Muntjac fraying occurs near the base of coppice stems, saplings and shrubs. Sallow species appear favoured, and other species regularly used include hazel, ash, maple, dogwood, blackthorn and aspen. Fraying can range in height from 10 to 60 cm, but is most typically 20-40 cm. Larger deer species fray and thrash with their antlers, roe at a height of 30-80 cm and fallow above 70 cm. Fresh fraying has distinctive frayed pieces of bark at the edge of the wound. Rabbits leave clean edges to the wounds they make. With old fraying from deer, frayed ends eventually disappear but the wounds may be visible for years. Look for fresh fraying particularly beside deer paths. If a deer population is reduced from high to moderate density, there might be a large reduction in fraying. Bark striping is carried out by the larger deer species, (fallow, red and sika bowl scoring of larger trees), resulting impacts are long strips of bark being removed and eaten normally from tree stems, usually on stems up to 5-6 inches diameter.

Grazing on ground flora: Deer of all species will selectively graze ground flora. On broad leaves, the small bites of muntjac may be distinctive e.g. on docks. Deer eat most species of flora, but not everything e.g. ground ivy is avoided. Their diet includes species that may be unpalatable to some other grazers e.g. bluebell, dog's mercury and cuckoo pint. It is necessary to focus on such grazing rather than assume you will notice it while walking around a site. So if you find a patch of flowering orchids or bluebells, check whether some have been grazed off – stalks should be apparent. Grazing on long-lived perennials can reduce their size and affect their distribution. Other species may spread at their expense e.g. grasses, sedges and ground ivy. Make a list of species that appear to be ungrazed. Record any changes in plant distribution – ask local naturalists for information. On taller plants, such as stinging nettle, it may be apparent which species was responsible for any grazing from the height of the bitten ends e.g. grazing by muntjac is unlikely to be above 50 cm. Levels of grazing can be quantified but methods of sampling should be objective. Scoring will depend on palatability as well as level of grazing e.g. more than 15% would score 3 on the less palatable bluebell but more than 50% would be required to score 3 for the more palatable oxlip.

Appendix B

Recording sheet for assessing deer activity and impact

Date:	Site:	Species present:
Time spent:	Recorder:	Species doing most damage:

Activity	Tally (Occurrence)	Score (0-3)
Sightings of deer		
Slot marks		
Active pathways		
Droppings & scrapes		
TOTAL SCORE		

Survey Notes (*As you undertake the survey ensure that enough written notes are taken of what you see*): You may need more space than this..:

Damage		Tally (Occurrence)			Score (0-3)
		Low	Moderate	High	
Flora/grasses eaten					
Woody shoots eaten	Regeneration				
	Coppice				
	Bramble				
	Other				
Bark removed	Fraying				
	Bark stripping				
Browse line	Bramble				
	Coppice/standards				
	Shrubs				
Broken stems					
TOTAL SCORE					

Important notes:

1. Note deer species seen, and which is most abundant
2. Note preferential browsing on woody shoots e.g. ash regeneration browsed but hazel coppice regenerating ok
3. Note browse lines on particular species or common throughout woodland
4. Bark removed may be from fraying or stripping, bowl scoring; note species likely to be carrying out damage and type of impact.
5. If you wish to split deer activity and impacts to species this may be simply carried out, but where impacts and activity of smaller deer are masked by larger species present care must be taken to ensure that over or under recording does not occur.
6. Adequate notes must be taken as the survey is carried out of what you see on site to help with analysing repeat surveys.

Appendix C

Deer Cull Data Record

Estate/Property:_____ Stalker:_____

Number	Date	Species	Sex	Location	Carcass Weight	Bullet Placement	Age (years) or age class	Pregnancy		Lactation		Comments Notes
								NP	P	Yes	No	