North Kent Woods and Downs NNR Deer Strategy and Management Plan

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(with additional material provided by Katriona Sharp, Kent Downs National Landscape)

Client: North Kent Woods and Downs NNR
c/o Kent Downs National Landscape
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This report was commissioned by the North Kent Woods and Downs National Nature reserve partnership (NNR), working in partnership with Natural England and funded by National Highways to provide evidence to support a Deer Management Group. Any data collected during the site visit relating to deer population and habitat will be used in reporting. This material supporting the Deer Management Plan was provided by Anita Stone. Anita has been an independent forestry consultant since 2016, advising landowners (farmers, environmental organisations, charities and other private landowners) in Suffolk, Essex and Cambridgeshire on the management, restoration and creation of semi-natural habitats on their land. Prior to that Anita worked for the Forestry Commission, Natural England and DEFRA from 2000 to 2016.

Structure of the report

This report is based around the structure of the Forestry Commission's Deer Management Plan template, which has been filled in on behalf of all of the partners interested in deer management by Anita Stone. This information is augmented by additional relevant information and completed by further recommendations and some costings for co-ordinating the Deer Management Group. The final document and additional text was written by Katriona Sharp (Kent Downs National Landscape). The authors wish to offer thanks to everybody within the North Kent Woods and Downs NNR partnership who has taken part in the process and have given their time so freely.

Draft version prepared by:	Anita Stone MICFor, MCIEEM	23rd September 2024
Final version prepared by:	Katriona Sharp	20th January 2025
Checked by:	Anita Stone MICFor, MCIEEM	23rd January 2025

Contents

1 Executive Summary

Background

The North Kent Woods and Downs NNR partnership contracted Anita Stone to develop a deer management plan and strategy.

Anecdotal evidence backed up by a Deer Impact Assessment (co-ordinated by Vineyard Farms Ltd (Silverhand Estate) and Kent CC) carried out in March 2022 established that there is a population of fallow deer in the North Kent Woods and Downs NNR area. A loose collective of organisations had begun talking to one another, including Vineyard Farms Ltd (Silverhand Estate), National Trust and Cobham Hall School (the school is not currently part of the NNR partnership).

Progress in 2024

Anita Stone has worked with the NNR partnership and the school to help understand:

- What current levels of deer management are
- How partners view the need for deer management
- Identify partners that require stalkers
- The desire to create a Deer Management Group

Cobham Hall School and Vineyard Farms Ltd (Silverhand Estate) were actively managing deer by the time this report was written. National Trust are now actively seeking a stalker to manage deer at Cobham Wood. Cobham Park and Rochester Golf Club are also stalking deer, though not formally part of the management group.

Recommendations

Current deer levels are not as high as in other parts of South-East England, but ongoing management and monitoring is needed to ensure that the population does not grow. It is recommended that a North Kent Woods and Downs Deer Management Group is set up and meets twice a year to:

- Discuss deer management issues
- Assess populations, commission Deer Impact Assessments
- Collate cull information
- Co-ordinate the work of stalkers and discus issues
- Support access to Forestry Commission funding (deer management forestry options (WS1)) for those that need it by facilitating Woodland Management Plans

2 Background and Introduction

2.1 The North Kent Woods and Downs National Nature Reserve

The North Kent Woods and Downs National Nature Reserve (NNR) is a partnership of organisations working together to affect landscape scale change for nature conservation in an area between Gravesend and the Medway Towns. A map of the NNR partnership area can be found on page 21.

The NNR partnership has developed a range of management strategies and implementation plans over the course of 2024. These include:

- Landscape Character Assessment and Implementation Plan
- Deer Strategy and Management Plan
- Heritage Strategy and Implementation Plan
- Grazing Strategy and Implementation Plan
- Ecological and Environmental Strategy and Implementation Plan
- Veteran and Ancient Tree Strategy and Implementation Plan
- Visitor Access and Community Engagement Strategy and Implementation Plan

2.2 The Aims of the Deer Management Plan

Anita Stone was contracted to provide advice on deer management in the North Kent Woods and Downs National Nature Reserve (NNR). The advice will guide partners and land managers about effective deer management and provide data for future funding applications. However, the report will also discuss general management options for the area and mitigate further population increases. An initial deer survey of the area was commissioned in 2022, funded by the Farming in Protected Landscapes grant. Data and findings from this initial report are used to evidence deer impact on the area.

The UK deer population is estimated to have increased from 450,000 in the 1970s to two million today. They are now at the highest level for 1000 years. This population increase brings many risks and issues. It causes a substantial threat to young trees and woodlands, and tree planting ambitions. It can reduce timber crop value by 30-50% through browsing damage. It can cause significant crop and agricultural damage, with some individual landowners having lost over £1 million per year due to deer damage. It can also be harmful to deer themselves, with overpopulation causing malnourishment and allowing diseases to spread more easily. Our objective

is to ensure a well-managed and healthy wild deer population in the National Nature Reserve, which mitigates the threat to long-term environmental, social, or economic sustainability. A deer population that is in balance with its ecosystem will allow woodland to flourish, with all the healthy understory vegetation needed to support iconic woodland species. This will also reduce the damage that deer can cause to agricultural crops and timber production.

Deer management is crucial not only for immediate conservation goals but also for the long-term health and sustainability of deer populations. Careful management helps ensure that deer populations remain healthy and robust. A well-managed population tends to have better body condition, fewer parasites, and a lower risk of disease, benefiting both individual animals and the ecosystem. Ultimately, deer management is about achieving a balance that serves both the welfare of the deer and the broader environmental goals that humans set.

2.3 Deer Populations in the National Nature Reserve

The candidate National Nature Reserve is a landscape-scale area dedicated to conservation and access. Deer numbers in the area are spiralling, due to a lack of natural predators and more favourable conditions due to warmer Winters, changing agricultural practices (more Winter sown crops), range expansions of non-native deer species etc.

Increased numbers of deer can negatively impact the candidate NNR, affecting sapling regeneration, coppice regrowth, shrub layer and flora, particularly in newly coppiced areas or felled areas. They are particularly prevalent in woodland sites, often coming out to feed on grassland and arable crops at night. Partners are reporting greater sightings of deer, largely on the south of the A2 divide, although there now have been isolated sightings on the northern side of the A2. Deer populations can increase by over 30% year upon year, under optimal conditions, so it is important to manage populations to a level before the problem becomes insurmountable. As a prey species, deer breed more rapidly than is necessary simply to sustain their population. The calculations used to model population growth can be found in the appendices.

Estate Name: North Kent NNR Deer Management Group
Address: c/o Kent Downs National Landscape
SBI number: n/a
Date of initial version: 23/9/24

Version Number	**Review Date**

Where appropriate this plan conforms with UKFS and UKWAS requirements. A Deer Management Plan (DMP) may be required as part of a WD2 grant and is compulsory for WS1 supplementary deer grant. Where an element of the WS1 DMP requires data submission, that element is highlighted in this document with an *.

2.4 Contacts

3 Locations and Areas of Holdings

3.1 Deer Location

Deer populations have been focussed on the partner sites south of the A2, with the road acting as a physical barrier to migration. Notably, more recently isolated pockets of deer have been spotted in the north of the A2 although it is generally believed these populations are still of a manageable size.

Some partners are already undertaking deer management, enlisting stalkers and obtaining funding through Higher Tier Countryside Stewardship Agreements. Neighbouring partners have expressed interest in deer management, and it may be most efficient to collaborate with existing stalkers on the ground so that an overarching deer management strategy can be implemented.

Successful deer management requires collaboration among stakeholders, because deer populations operate at landscape scales and across ownership boundaries. Stakeholders can include conservationists, farmers, and landowners and will often have varying objectives. Conflicting interests can complicate decisions, but open dialogue helps achieve consensus on management strategies. Ensuring balanced outcomes involves aligning management practices with the diverse needs of those who use and value the land.

Central Map Ref, postcode or Lat/Long, nearest town	TQ 689 670 – ME2 1HJ
Area (Ha) of woodland being entered or in CS WD2 / WS1	N/A
Area (Ha) of woodland creation	N/A
Total (Ha) area of all woodland	c. 705 ha
Total area of arable/crops	c. 1155 ha including grassland and arable.
Other (grass / marsh etc.)	As above.
Total area of holding	c. 1860 ha
Grant scheme(s) and landscape designations to which this plan relates	Proposed North Kent Woods and Downs NNR Deer Management Group.

3.2 Land Management Objectives

Partner landholdings in the NNR area comprise approximately 40% woodland with the rest comprising of grassland, arable and viticulture. Partners' management objectives therefore will vary greatly according to land usage.

Objectives	Impacts at Start			Impact Target			Comments
	Low	Mod	High	Low	Mod	High	
Ground Flora	X			X			Deer exclosure plots only recently installed on some of the land holdings so this and the features below have not had accurate monitoring carried out to do.
Shrub and sub-canopy	X	x		X			Shrub layer impacted in areas with higher populations.
Coppice management	X			X			Currently relatively low levels of browsing damage but it is likely that species diversity is being affected as more palatable species are removed in favour of sweet chestnut.
Woodland Natural regeneration	x	X		X			Protection in tubes has been necessary to protect natural regeneration in some areas, even then tubes have been knocked off reducing their efficacy.
Woodland Creation	x	X		X			
Forestry Crop Damage	x	X		X			
Landscape features e.g. hedges	x	X		X			Recently (2022) planted hedges in spirals are struggling to establish in places due to browsing and tubes being knocked over.
Agricultural Crop Damage	x			X			Some crop damage seen, again this has not been monitored using exclosures to give accurate representation of damage.
Deer Vehicle Collisions	X			X			No data available.

Other (state)							

3.3 Deer – Current situation and trends

Evidence is taken from the 2022 Deer Impact Assessment (DIA) and further partners' assessments. Further information can be found on deer populations, activity and damage at that time in the DIA found in the appendices.

Species	**Est. Activity Insert: High, Mod, Low**	**Trend** Insert → ↑ ↓	**Likely to appear in next 5 years?**	**Current Estimated numbers if known**	**Comments / Census method**
Red	None	-	Possibly	-	
Sika	none	-	Possibly	-	
Fallow	Medium north Low south	↑	Present	c. 70 - 100	A night census in 2022 recorded c. 100 fallow in the area. There has been some culling in 2024 but this is likely to have only removed the 2023 recruitment so the population is likely to remain c. 100
Roe	none	-	Yes		
Muntjac	low	→	present		1 muntjac seen in 2023, highly likely that others are in the area and will be breeding.
CWD	None	-	Yes		
Other e.g. Boar	none	-			

4 Deer Control Methods

4.1 Culling

Culling, or planned population reduction—remains the most effective method to manage deer numbers. It reduces damage to vegetation, limits biodiversity loss, and mitigates agricultural impacts. Culling can be targeted to address specific factors, such as age, sex ratio, or health, ensuring a balanced approach to population control. However, culling must be carefully managed to avoid unintended consequences, such as skewing sex ratios.

Advantages:

- Cost effective
- Grants available
- Can be undertaken by numerous registered stalkers
- Venison resale value
- Success easily monitored and evaluated
- Can be tailored to species, season,

Disadvantages:

- Some stakeholders have expressed an interest in exploring non-lethal alternatives
- Safety concerns voiced by a minority of partners, about stalking in publicly accessible spaces

4.2 Immune Contraception Vaccine

There is a second option for deer population reduction, immune-contraception vaccination (IC). This requires does to be injected with a long-lasting contraceptive. This method has proved highly effective in captive deer populations however, in wild deer populations effectiveness is greatly reduced due to several limiting factors. These include difficulties in capturing and marking deer, cost, prolonging of rutting season and movement of animals between herds.

Immune Contraception Vaccine:

Advantages:

- Highly effective in captive closed herds where implementation is more simple
- More socially acceptable
- Lower risk to the general public

Disadvantages:

- Expensive to implement

- Wild deer are difficult to trap/dart, particularly in densely wooded areas, trapping would cause significant distress to wild animals.
- Darted deer are not marked so can easily be double-dosed
- Open herds allow immigration of non-treated females and can lead to repopulation of the herd
- At least 50% of females must be treated for population rates to reduce with darting less effective than injecting.
- Non-breeding females live longer and are healthier, so the population lives longer so population decline is reliant on natural decline. Populations can increase before they decrease so is ineffective in large explosive populations.
- Prolonged rutting season leading to welfare issues.
- Deer deprived of normal social behaviours or social group inequalities.

5 Deer Management Issues

5.1 Current obstacles and challenges to effective deer control

Partners have reported that deer browsing impacts sapling regeneration negatively. Several sites have expressed an interest in deer management for conservation reasons, but several have practical issues such as public access and negative opinion surrounding deer stalking. This could be overcome with targeted communications about deer management and raising public awareness of issues surrounding growing deer populations.

Deer control is easiest to implement on private land where there is less focus on public access and fewer stakeholders. A few partners have already enlisted stalkers and secured funding for deer management through Higher Tier Countryside Stewardship schemes. It would be a sensible option to work collaboratively with any deer control- enabling existing stalkers to work across boundaries and implement a landscape scale deer management strategy.

Obstacles to effective deer management	**How does this affect deer management?**	**How will obstacle be addressed?**
Unpredictability of deer movements	Fallow herds are moving around the landscape, crossing the different land holdings south of the A2/high speed railway line.	The NNR Deer Management Strategy aims to bring the land holdings in the area together to control deer, hence this group DMP.
Public access / Recreational Activities	Several of the land holdings have public access as a core part of their business; National Trust, Woodland Trust, Plantlife. Others have high levels of access on public rights of way through their land holdings.	Careful planning of stalking and high seats away from access, thorough risk assessments, timings of stalking to avoid busiest access periods.
Game shoot limits deer stalking until end of game season	The Tarmac woodlands have a game shoot, no other land holdings have shoots.	Deer stalking will not cause disturbance to the game shoot if carried out sensitively. Stalkers and game keepers can work alongside each other.
Poaching	Limited evidence for this. However 2 badly shot animals were seen in 2023 which suggests this may be a low level issue.	Instigating formal deer control across the land landscape will increase the level of access by legitimate stalkers at times when poachers may be active, this will

		reduce any opportunities for poachers in future.
Lack of High seats	The current lack of high seats reduces sight lines for stalkers and therefore the effectiveness of culling.	Increase the number of high seats in appropriate locations.
Insufficient stalker time available	Access to qualified, experienced, professional stalkers will facilitate deer control.	Create a list of such stalkers within the area for the Deer Management Group. Use the BASC Register of Competent Deer Stalkers to access qualified stalkers: deer@basc.org.uk
Lack of collaboration with neighbours (Boundary Factors)	Herding fallow have roamed across boundaries in the past with relatively little control/collaboration between neighbour's, hence the formation of the DMG.	Discussion and collaboration between neighbours across the landscape is an objective of the DMG.
Lack of sightlines/ glades/ ride management	Some sight lines available but often on high access routes. Others may need widening.	Designated stalking sight lines may be required in the future away from PRoW or well know permissive routes.
Logistics of carcass handling or sale e.g. extraction, larder facilities, venison price or marketing	Equipment such as ATVs required to extract large fallow carcasses, chillers and access to outlets will be essential. Well established stalkers may have this equipment but others may need funding.	The proposed formation of a qualified stalker list will enable discussions with these stalkers to ascertain levels of equipment, routes to market etc.
Requirement for stalker training or experience	This has been a barrier to stalking in the past.	As above.
Other (state)	Several of the land holdings are Charities with high numbers of public members, hence introducing deer culling needs to be done sensitively, transparently and to the highest standards.	A deer impact assessment across the landscape in 2022 recorded and identified the deer population issue in this area, this deer management plan create a formal document to bring together stakeholders in the landscape to ensure effective control, the stalker list will ensure high quality stalkers are employed (see BASC list of qualified stalkers) and the ongoing work of the DMG will give over sight of the work and regular checks on progress and processes.

6 Overall Deer Management Objectives

6.1 Annual Deer Management Targets

The 2022 deer census estimated deer populations to be a fallow herd of approx. 100 deer. Estimated cull requirements to maintain the current population for the area are outlined below.

Objectives	Targets: (Reduce/ Maintain/ Increase)	Comments
Overall deer population	reduce	Reduce the population of fallow in the northern half of the area where numbers are highest. Maintain the currently low population level in the southern part of the area.
Overall deer cull numbers*	30 per year for 3 years then reducing.	Assuming a herd of c. 100 in the area the overall cull to reduce this to a sustainable level should be
Deer health	Maintain	Reducing the population is likely to increase herd health especially where they have been relatively contained in particular land holdings.
Venison (adding value)	Increase	Continue and increase the good work of supplying local pubs/restaurants/butchers.
Syndicate, client, let stalking	Reduce	This is a reduction cull carried out by qualified, experienced stalkers with a shoot on site policy rather than trophy selection.
Other		

Fallow deer season runs from 1st August to 30th April for bucks and 1st November – 31st March for does. Muntjac deer are regarded as an invasive species which breeds all year round and can therefore be culled year-round.

Deer Species strategy	
Red	n/a
Fallow	Collaborative culling of fallow across the landscape so that as the herd moves from 1 site to another the herd can be effectively and efficiently reduced.
Sika	n/a
Roe	n/a
CWD	n/a
Muntjac	Shoot on sight policy from high seats to stop the population expanding.

6.2 Deer Management Effort

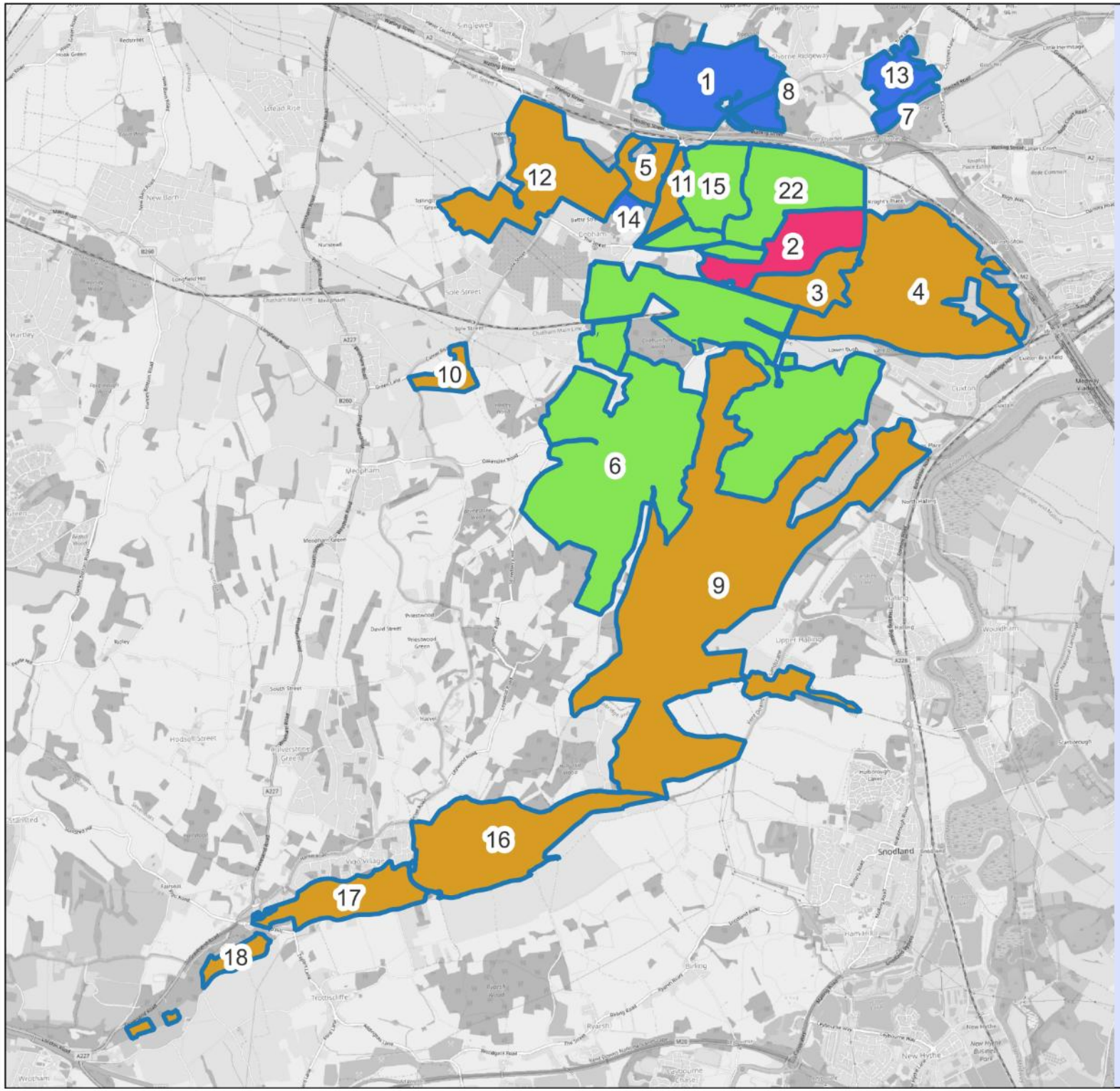
The estimated manpower required for the deer population to be stabilised is estimated below:

Deer Management method	**Calculate the est. Nº of stalkers multiplied by the Nº of days for the year**	**Comments**
Individual Stalker (s)	352 days of stalking per year required	On 705 ha with 1 man day per 2 ha there is a requirement for 352 days of stalking. If c. 13 stalkers are put in place across the landscape this amounts to 44 days or 88 outings (split into a.m. or p.m.) per year this amounts to 1 visit per week per stalker which should be feasible.
Team shooting within boundary	Within the amounts given above	As above
Collaborative culls with neighbours	As above	As above
Night shooting (Under Licence only)	n/a	Only considered once formal day time stalking shown to be ineffective.
Out of season culling. (Under licence or Sect 7 only)	n/a	As above

Deer Mgt. Group meetings	Every 6 months	To share knowledge, results, inform and update future culls and procedures.
Stalker training or Skills Development	1 day per year	In collaboration with FC Deer Officer and other deer training/information providers.

6.3 Annually reviewed cull / trend summary (cull year 1st May to end April)

Cull	Year	2024/5		2025/6		2026/7		2027/8		2028/9		2029/30		2030/1		2031/2		2032/3		2033/4	
		Expected cull	Actual	Expected cull	Actual	Expected cull	Actual	Expected cull	Actual	Expected cull	Actual	Expected cull	Actual	Expected cull	Actual	Expected cull	Actual	Expected cull	Actual	Expected cull	Actual
Red	Females																				
	Males																				
	Total																				
Fallow	Females	20		20		15		10		5		5		5		5		5		5	
	Males	10		10		15		10		5		5		5		5		5		5	
	Total	30		30		30		20		10		10		10		10		10		10	
Sika	Females																				
	Males																				
	Total																				
Roe	Females																				
	Males																				
	Total																				
CWD	Females																				
	Males																				
	Total																				
Muntjac	Females	Shoot	On	sight	policy																
	Males																				
	Totals																				
Trend (copy trend arrows into Deer numbers and DVC cells) → ↑ ↓ Scores (H, M, L for impact/ activity)	Deer numbers																				
	Deer impact																				
	Deer Activity																				
	DVC's																				



North Kent Woods and Downs NNR

Deer Management

- Active management
- Seeking a stalker
- No management/ monitoring
- Deer not thought to be present

1. Shorne Woods Country Park
2. Cobham Woods
3. The 'Leisure Plots'
4. Ranscombe Farm
5. Ashenbank Wood
6. Silverhand Estate
7. Crabbles Bottom
8. Shorne Common Rough
9. Holborough Woodlands
10. Camer Park
11. West Park
12. Jeskyns Community Woodland
13. Great Crabbles Wood
15. Cobham Hall School
16. Birling Estate
17. Trosley Country Park
18. Wrotham Water
22. Rochester and Cobham Park Golf Course

0 1 2 3 4 km

Kent Downs National Landscape

White Horse Ecology

7 Deer Monitoring

It is important to maintain strict monitoring of the deer management effort with accurate cull figures made publicly available. Not only is this a requirement for several funding streams it is important to work collaboratively so that the success of the control can be recorded, and an accurate estimate of the deer population is maintained.

Regular meetings and communications between partners and stalkers is essential to ensure successful deer management. A dedicated Deer Management Group (DMG) and deer management coordinator are recommended to ensure records are up to date and communication between stalkers and partners is maintained.

Monitoring method	Frequency and monitoring period	By whom	Comments
Cull data*	annual	DMG facilitator	Recorded on the FC template and provided within 1 month of the end of the fallow doe season.
Habitat Impact Assessment*	Once every 3 years	DMG facilitator	If considered necessary.
Exclosures*	annual	Landowner/ managers	Using the FC WS1 template and photography.
Deer counts	occasional	FC or other providers as advised by the FC	If considered necessary.
Nearest Neighbour crop assessment	As above		
Arable crop impacts	annual	Landowners/ mangers	Using exclosures
Quadrat Surveys	n/a		
Other			

7.1 Physical protection/infrastructure to support deer culling

Protection Method	Number or estimated Area (Ha)	Description
Deer fencing	Possibly for larger woodland creation projects	
Tree guards	Yes for smaller areas of planting/ restocking within woods.	
Chemical Protection (Taste/Smell/ Palatability)	Possibly	
High seats	yes	Well placed high seats will increase efficiency of cull.
Shooting sight lines	yes	As above
Deer glades	possibly	As above
Other (state)		
Protection Method	**Number or estimated Area (Ha)**	**Description**

7.2 Additional elements (discussed with Deer Officer/Woodland Officer)

Appendices

NOTE: For WS1 a full set of appendices is not required during the application process however, if you have existing relevant records/data that you would like to submit

then please do so, a boundary map is particularly useful. The compulsory elements (marked *) must be in place before the end of year 1

E.g.

- Boundary Map -found below
- Habitat Impact assessments Year 1, 3, and 5*.
- Past Impact assessments (before the start of this plan, if available)
- Map of exclosures*
- Monitoring results for exclosures at years 1, 3, and 5, with photographs*
- Cull and cull effort records from start of this plan*
- Past cull data (before start of this plan, if available)
- Deer stalking and associated risk assessments
- Formal Stalking Agreement or Contract, if applicable.

These are not applicable at this stage and currently only Vineyard Farms Ltd (Silverhand Estate) needs to report under the terms of its WS1 agreement.

8 Additional Recommendations

8.1 Recruitment of Stalkers

The deer management plan and the 2022 Deer Impact Assessment can be used as evidence of need and to show that a formal requirement for deer stalking has been undertaken. An example Deer Stalking Agreement Template has been provided for partners as a tool when employing stalkers. These documents can be used in discussions with Stalkers to ensure the objectives of the deer management are aligned.

Qualified stalkers can now be recruited using the BASC 'Register of Competent Deer Stalkers. Contact details of qualified stalkers are available by emailing BASC at: deer@basc.org.uk for contacts of qualified stalkers in the area.

8.2 Deer Management Group (DMG)

A DMG would bring together stakeholders twice a year to discuss and update deer management objectives and achievements after each culling season, sharing information and allowing for a more effective cull. They would be charged with facilitating grant applications and identifying further requirements to achieve an effective cull i.e. access to markets, requirements for chillers etc.

Role of a Deer Management Co-ordinator

The co-ordinator would arrange and minute the Deer Management Group meetings, collect and store cull information, assist or signpost people with grant applications, and recruit stalkers. They would check in with stalkers every month during the female fallow cull season to identify any issues or barriers to an effective cull and attempt to remedy these.

Land holdings not entering Countryside Stewardship Higher Tier and therefore with no requirement for Deer Impact Assessments or exclosure plots should consider further Deer Impact Assessments once deer culling has been in place for 2 years, this will record differences in activity and damage levels compared to the 2022 Deer Impact Assessment.

The suggested date for the next Deer Management Group meeting is April 2025 allowing stalkers 1 month to collate cull records.

The cost of a Deer Management Co-ordinator is estimated below.

Deer Management Co-ordinator Approximate Costs (costs based on consultant carrying out work at £60 per hour)		
Frequency	**Role**	**Cost**
Annual	**Arrange/minute the DMG meetings (2 annually)** Time input/costing: 4 days/32 hours per year (1 day per meeting and 1 day per meeting to arrange/prepare meeting information/documents/minute/follow up)	£1,920
Annual	**Collect/store cull information** Time input/costs depends on number of stalkers active – 4 hours per stalker to chase information and collate into master spreadsheet. Based on 4 active stalkers	£980
Annual	**Check in with stalkers on a monthly basis during the female fallow cull season (1st November to 31st March i.e. 5 months)** This will identify any barriers to an effective cull and attempt to remedy these. Time input/cost depends on number of stalkers 0.5 hours/month x 5 = 2.5 hours at £60/hr = £150 per stalker/year	£600
	Annual costs	**£3,500**
One-off	**Finding stalkers via the BASC contact** This is more straight forward, although it would depend on whether the owner wanted help with interviewing the stalker Time input/cost could vary from 1 hour to 1 day at £60/hour = £60 to £480 per stalker/site.	£480 per site
One-off	**Assist/signpost people with grant applications.** The FC can help with grant application sign posting and local forestry agents should be employed to apply for grants for landowners, but this would have a cost to the stakeholder. If there is a desire to subsidise this it would depend on the complexity of the grant application, as deer control supplements (WS1) are likely to be part of a wider woodland management application, which would take a high time input and depend on the size of the woodland, it would also need a woodland management plan (WMP) to be in place first, again a high time input and would need to be done by a forestry consultant. This is therefore a complicated area	c. £2,000 per site

	to cost out. One option would be to subsidise the forestry consultants cost for this work or a proportion of this on a case-by-case basis. It would be possible to assist landowners by getting them registered RPA online, their land registered with the RPA, doing the WMP application for them because these costs are not covered by the subsequent WMP grant, however this time input could still be high depending on the number of woodlands under the land ownership. For 1 small wood this could take 4 hours but for larger land holdings this could take 2 days.

The table above is based upon the minimum requirement and is costed as if a woodland consultant was carrying out the work. However, if the role was part of somebody's job and funding secured then it is estimated that a 0.25 FTE equivalent post could carry out the tasks above. It would also have the advantage of:

- Being able to co-ordinate all woodland owner's Woodland Management Plans and incorporate deer management options (WS1) and act as a single point of contact for the local Forestry Commission officer.
- Co-ordinate construction and monitoring of exclosures.
- Being able to pursue additional initiatives, funding, research opportunities etc.
- Research alternatives to culling as an option for an area with high levels of public present.
- Develop joint initiatives and to share best practice with other NNRs and partnerships.

8.3 Accessing Funding for Deer Management

Funding for capital items and equipment is available to partners through several funding streams.

8.3.1 Countryside Stewardship Higher Tier Agreements

Countryside Stewardship Higher Tier Government grant funding for Woodland Improvement (WD2)

WD2: Woodland improvement - GOV.UK

Funding currently stands at a minimum of £1,000 or £127/ha for areas over 10ha (November 2024). Applications should be made through your local Forestry Officer. The application for higher-tier schemes is currently closed. The option aims to improve the biodiversity of woodland and/or make it more resilient to climate change.

This option should be used to:

- restore plantations on ancient woodland sites
- enhance priority habitats
- enhance priority species
- improve resilience to climate change through continuous cover forestry (CCF)

Partners will receive an annual sum in return for the agreement. There are several eligibility requirements for entering into a CS Higher Tier agreement including a Forestry Commission approved Woodland Management Plan (WMP). Assistance in creating a management plan is available:

Create a woodland management plan - GOV.UK

Supplementary grant for Deer Control and Management (WS1).

Management Requirements for Woodland Supplement WS1 – Deer Control and Management: operations note 59 - GOV.UK

This currently stands at £105/ha (November 2024). This can run alongside the WD2 option above. Deer should be identified as a threat to semi-natural woodlands, regeneration and/or where deer browsing negatively impacts on woodland features, ground flora or structure. Specialist advice is available from the local deer officer/woodland officer.

The grant should be used to:

- Reduce deer browsing and grazing impacts to woodlands, ground flora and vulnerable features in the wider landscape enabling damaged ecosystems to recover
- improve woodland structural and species diversity helping to increase resilience to climate change, pests and diseases

- make sure the population of deer is sustainable for the appropriate habitat

Requirements

- In addition to P2015 under WD2 (baseline option), you should use the Deer Management Plan (DMP) Guide to produce a DMP in collaboration and agreement with your local Deer Officer/Woodland Officer and submit it by the end of year 1. Your DMP should show that you have carried out a baseline deer habitat impact and activity assessment to inform your deer management planning. Your DMP will build on the draft plan that you submit with your Initial Application documents
- In year 1 of your Higher Tier Agreement you should commence erecting additional deer monitoring exclosures. The number and location of deer exclosures will be agreed with the Deer Officer or Woodland Officer. Follow the advice and specifications in Forestry Commission operations note 59 to erect monitoring exclosure plots. You must send photographic monitoring evidence of these plots to your local Deer Officer/Woodland Officer when you erect them in year 1, 3 and 5 of your agreement
- Carry out agreed levels of culling activity (as agreed with Deer Officer/Woodland Officer in your Deer Management Plan). Provide evidence of culling activity and cull returns to the Deer Officer/Woodland Officer annually, following the guidance and template provided at Forestry Commission operations note
- Provide a report to show annual habitat impact assessments following the guidance and templates. This should include a graded (high/medium/low) impact and activity summary and photographic evidence of the survey. You should carry out habitat impact assessments in all significant woodland habitats and structure types of each woodland across the landholding within the agreement as soon as possible in year 1 (to support the DMP) and then in years 3 and 5.

Year 1:

- a draft DMP - send this with your initial application documents

By End Year 1:

- DMP in place
- a record of the number of deer culled
- deer habitat impact assessments
- exclosure plot reports

Years 3 and 5:

- monitoring reports of the agreement to confirm progress (for example, providing before and after photographs, a record of the number of deer culled and the results of deer monitoring)

You must keep the following records and supply them on request:

- a Forestry Commission approved management plan that justifies the need for this option
- a DMP
- monitoring reports to confirm progress of the agreement (for example providing before and after photographs, a record of the number of deer culled and the results of deer monitoring)
- evidence of activities undertaken through monitoring, photography and marking
- any bank statements, receipted invoices, consents, or permissions connected with the work
- records of all management activity on the option area for each parcel, including an operational site assessment (or similar) to show UK Forestry Standard (UKFS) compliant operational activities

8.3.2 Countryside Stewardship Capital Agreements

Higher Tier Capital Grants application form: Countryside Stewardship - GOV.UK

FY1 Deer High Seat

FY1: Deer high seat - GOV.UK

Payments of £265 per unit in areas where the woodland management plan identifies deer as a threat to the woodland's condition.

Evidence required:

- any consents or permissions connected with the work
- receipted invoices, or bank statements where a receipted invoice is unavailable
- Forestry Commission Management Plan approval letter
- Photographs of the work

Further information about constructing high seats is available in The Deer Initiative's best practice guide.

FG11 Deer Exclosure Plot

FG11: Deer exclosure plot - GOV.UK

Payments available of £212.56 per plot.

The aim of the option is to protect areas of woodland that are approximately 16 square metres in size from deer browsing. This will allow monitoring of the area's regeneration potential and the impact of browsing.

Requirements include:

- Erect a deer exclosure plot that is at least 1.5m high by 4m by 4m, or if you're applying for WS1 (Deer Supplement) you can agree on alternative specifications with your local deer officer
- Ensure the fence meets the specifications set out in the Forestry Commission Forest Fencing Technical Guide, but with no gates
- make sure the fence is inspected at least once a year
- maintain the fence so that deer cannot enter the site for the length of the agreement

Agreement holders are likely to need to keep the following records and supply them on request:

- any consents or permissions connected with the work
- receipted invoices, or bank statements where a receipted invoice is unavailable
- Forestry Commission Management Plan approval letter if required
- Photographs of the work

8.3.3 Farming Equipment and Technology Fund (FETF)

Farming Equipment and Technology Fund 2024 (closed) - GOV.UK

In the past the Farming Equipment and Technology Fund provided grants for chiller units to store carcasses in to facilitate access to the venison market, this is currently closed but may reopen in the future. This is available to Woodland managers or Contractors carrying out operations for farmers.

Applications are checked for eligibility and scored by the RPA. The RPA will pay you a grant amount of 50% or 60% towards either:

- the average cost of the item – if an item costs you the same or more than the expected average cost in the item lists
- the actual cost you pay for the item – if an item costs you less than the expected average cost in the item lists

FETF108SH - Thermal image camera
Expected average cost of item (£): 710
Grant amount (based on a quantity of 1) (£): 355
Item must:

- be a colour thermal camera or tablet
- be handheld and have a viewing screen
- have an infrared detector generating images of at least 18,000 pixels
- have a temperature scale on screen with built-in still and video recording facilities
- upload or download images for storage and analysis

FETF423 - Chiller trailer for deer carcasses

Expected average cost of item (£): 15,091

Percentage paid towards item: 60%

Grant amount (based on a quantity of 1) (£): 9,054.60

This item is new for 2024. Item must:

- be a chiller trailer for deer carcasses
- be constructed to food grade standard with minimum 55mm insulation on all walls
- have a maximum gross weight for trailer (including pay load) no more than 1500 kg
- have a maximum internal height not exceeding 2.0m
- contain 2 high level hanging rails
- include a minimum of 20 roller-hooks and gambrels to hang the deer carcasses
- operate in temperature range of 1C to 8C, trailers with freezer capability not eligible
- have a lockable rear door
- be fitted with a rear carcass lift with winch
- be fitted with a temperature data logger to monitor and record temperature when in use
- be fitted with a rear non-slip galvanised step

You must provide this item's serial number when you submit your claim for payment.

FETF424 - Large chiller trailer for deer carcasses

Expected average cost of item (£): 19,839

Percentage paid towards item: 60%

Grant amount (based on a quantity of 1) (£): 11,903.40

This item is new for 2024. Item must:

- have same requirements as a small deer chiller trailer **plus**
- have a maximum gross weight for the trailer (including pay load) no more than 3500 kg
- include a minimum of 30 roller-hooks and gambrels to hang the deer carcasses

Appendix 1 – Deer Impact Assessment 2022

Deer Impact and Activity Report – Template provided by the Deer Initiative

Deer Impact and Activity Report for Cobham to Crookhorn Woods
March 2022 (updated January 2025)
Written by Anita Stone

Date	1,2,8,9,15 March 2022
Woodland Name	Northern survey area: Cole Wood (south eastern edge of golf course), Cobham Park (National Trust woodland area), The Plotlands (Lodge Wood/Norwood Grove/Nor Wood), Ranscombe Farm (Plantlife woodland area; Birch, Great, Broad Oak, Clay Pond, Head Barn, Merrals Shaw, Longhoes, Mill Hill woods). Southern survey area: Cobhambury, Upper Bush, Hatch Hill, Red, Little Red, Bushy, Halling, Home Bavins, North, Rochester Forest, Horseholders, Ten Acre, Great Buckland, Greatpark, Hanginghill, Crookhorn woods.
Recorder:	Anita Stone
Species present:	Fallow
Species doing most damage:	Fallow
Weather Conditions:	Light drizzle throughout 1st and 2nd March (10°C), dry and bright on 8th, 9th and 15th March (12°C)

This deer impact and activity (DIA) survey and report has been carried out following the Deer Initiative (DI) guidance and methodology, based on previous work by A. Cooke. For further details on this process please see the DI website at:

http://www.thedeerinitiative.co.uk/monitoring/activity-and-impact.php

What the Deer Impact Score Means
Low: Impacts registered at this stage are unlikely to have a detrimental effect on the majority of the woodlands. Plants that are particularly palatable to deer will be affected (e.g. oxlip). Hardwood regeneration and coppice growth will show some impact, but stems should be able to quickly get above browsing height. Unfenced coppicing may be possible, but some browsing will occur, growth rates and the quality of stems may be reduced. Small, isolated areas of coppice or natural regeneration will be more vulnerable than large areas. At this level of deer impact most woodland features will survive.

Deer Impact and Activity Report – Template provided by the Deer Initiative

Medium: Poor growth or loss of palatable woodland plants is very likely at this level of impact; coppice regrowth and natural regeneration will be affected and is unlikely to be successful unless fenced. Understory will deteriorate and reduce in density. Continuous bramble will start to be broken into smaller patches if larger species are present. Brash piling around coppice stools or dense dead hedging may protect coppice stools and regeneration, but after 2-3 seasons these will be broken down and deer will start to impact on the lower coppice shoots and areas between the coppice stools, affecting regeneration and ground flora. Temporary fencing should be regarded as a breathing space in which to reduce deer numbers, otherwise when deer are able to re-enter the previously fenced area they may cause considerable impact.

High: Loss of natural hardwood regeneration is likely and any unfenced coppice will be severely browsed. If this continues coppice stools are likely to begin to die off. Most of the floral interest in the woodland will be lost and even usually non palatable plants will be browsed, grasses or sedges may begin to dominate the woodland floor where the canopy is not dense. Over a long period the understory may be severely affected with simplification of the woodland structure. Some changes may be permanent.

Deer Impact and Activity Report – Template provided by the Deer Initiative

Background Notes on Deer Behaviour, Populations and Effects on Woodland
England has 2 native deer species; roe and red deer, the remaining 4 species; fallow, muntjac, sika and Chinese Water Deer were introduced at varying times in the past. Numbers and range of all deer are increasing due to many factors including milder winters, increased winter cropping (providing a year-round food source) and exotic deer species escaping from collections. Accurate estimates of deer population increase each year for different species are not available (probably because they are affected by many variables each year) however, studies in North America showed population increases of more than 43% per year. Using a conservative estimate of 30% population growth each year a population of 60 animals would increase to 171 animals over a 5 year period.

Results show that ancient woodlands within the wider arable/grassland/built landscape have a low carrying capacity for deer grazing/browsing; fallow deer consume between 2 and 5.5 kg of vegetation **per day** depending on their size and what they are feeding on, hence even low numbers have an impact on sapling regeneration, shrub layer (vital for small nesting birds) and flora. The rapid growth of all deer species across much of England now far out strips this carrying capacity, damaging habitats and pushing deer into previously unoccupied areas. Currently the survey area only supports fallow deer however muntjac and sika are in surrounding areas. Given muntjacs year-round breeding pattern, likely producing higher than 30% population growth, they are likely to move into the area in the near future.

Summary of Results
Results of both the DIA and night census show medium to high activity and damage (impact) on the golf course and adjacent woodlands (56 fallow on the 1st night census and 79 on the 2nd night census), with pockets of high activity and damage generally to the north of Ranscombe Farm (26 fallow on the 2nd night census, not surveyed on the 1st night census as access arrangements not agreed, however this number was corroborated by a local resident). The exception in this northern part of the survey area was Mill Hill which showed no/low activity and damage, possibly due to stock fences and high access use by the public.

The southern survey area showed low activity and damage during the DIA survey, this tallied with the night census with no animals seen on the 1st night census and only 3 fallow seen during the 2nd night census. Activity appeared to be from lone animals, suggesting lone bucks or small groups. Sika deer are more likely to be found individually or in small groups, although distribution maps show them relatively nearby, there are currently no local sightings of sika.

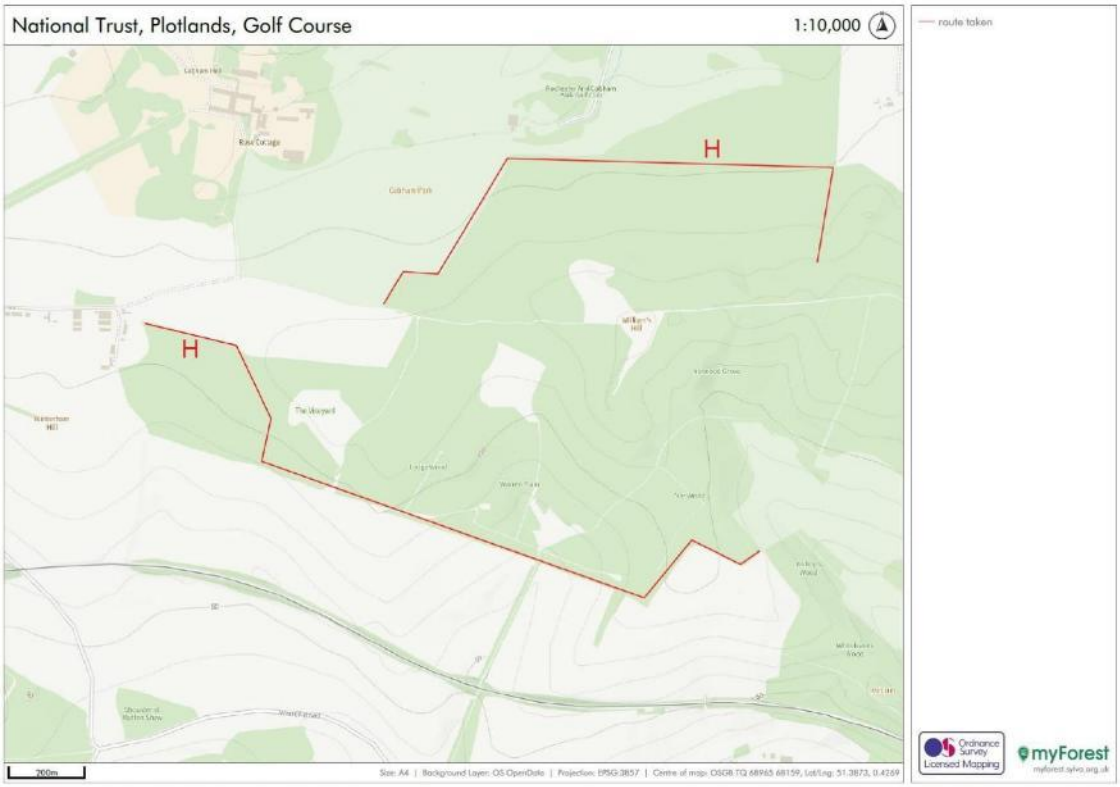
Deer Impact and Activity Report – Template provided by the Deer Initiative

Other grazing/browsing mammals recorded during the 1st night census included 3 hare and 69 rabbits. 36 badgers were recorded with 15 on 1 field!

Please note that the score outcome is not a criticism, it is just a reflection of survey findings.

Wood	Activity score					Impact score				
	2022	2023	2024	2025	2026	2022	2023	2024	2025	2026
Cobham Park/Golf course/Plotlands	M/H					M/H				
Ranscombe Farm	M					M				
Mill Hill	L					L				
Southern Woods	L					L				

National Trust, Plotlands and Golf Course (southern edge) including 'The Vineyard' and the area to the west of this, Lodge, Nor, Norwood, the edges of the fenced section of Cobham deer park, the southern edge of Cole Wood (golf course). See the route taken (red line) on the map below.



General notes:
Badger activity is high throughout the area but especially along the southern edge of the survey area, possibly due to large badger setts in and around the quarry. Numerous badger racks ('racks' simply

Deer Impact and Activity Report – Template provided by the Deer Initiative

means tracks habitually used for access into and around the woodland area) lead out from the southern edge onto the grass margin and field. These were checked carefully for deer slots during the survey as deer and badger often share racks, however in this instance few slots were seen. Deer activity and damage was highest in certain pockets; along the northern edge of the block to the east of Lodge Farm and throughout the survey route along the southern end of Cole Wood (north of the deer park/southern edge of the golf course), see map above showing 'H' for high activity. Both these areas of activity/damage identified through the DIA were shown to be areas of high activity in the night census (see map at the end of this report). Activity and damage are often easier to detect on woodland edges, or where deer movement is contained within a smaller area, as reflected here in the unfenced area of woodland to the east of Lodge Farm and in Cole Wood/the golf course. However, the population of deer will be active throughout the woodland area and affecting the woodland habitat through grazing and browsing damage. Dense leaf litter below sweet chestnut stands reduced the visibility of lightly or even frequently used racks.

Activity	Score (0-3)	Low Med High	Comments
Sightings of deer	1	L	1 fallow doe seen in the southern area of Cole wood (golf course).
Slot marks	2/3	M/H	Fresh slots on most racks.
Active pathways	2/3	M/H	24 racks seen within the woodlands, most in Cole Wood and the area between Lodge Farm and the quarry. 24 racks on 3.7km transect = 6.5 racks/km = M, 18 wood edge racks on 260m edge transect = >20/km = H.
Droppings & scrapes	1	L	7 dung scatters on 3.7km survey route = <2/km (1/km = L, >30/km = H). The DI guidance states that dung counts should ideally be carried out separately because dung is camouflaged it is hard to record when also looking for and recording other signs, hence this score is likely to be an under recording. 5 scrapes = <2/km = L (1/km = L, >10/km = H).
TOTAL SCORE	6/8	M/H	The DI methodology states that if the active pathway score is high the overall activity score should be recorded as high (see page 6 of the methodology). Areas of high activity are obvious in certain areas as shown on the map above by a red 'H'.
Trend	N/A: 1st survey		

Damage/Impact	Low Medium High	Score (0-3)	Comments
Flora/grasses eaten	L	1	Due to the time of the survey most flora hadn't emerged yet. Given that fallow consume 2 to 5.5kg of vegetation/day and activity levels are M/H it is likely that this L score is an under recording of damage. Surveys later in the year, once flora has emerged, would show more accurate damage levels and are likely to show removal of flower

Deer Impact and Activity Report – Template provided by the Deer Initiative

				(and therefore seed) heads, reducing flora populations over the long term. Placing small (approximately 4 x 4m) 'exclosure' plots scattered throughout the woodland would clearly show vegetation with and without browsing/grazing damage over time. A variety of shaded and non-shaded locations should be used.
Woody shoots eaten	Regeneration	M/H	2/3	Little sapling regeneration of >50cm height on transect route, see photos and notes below on structure, this is likely to be partly due to dense shading from the canopy but also browsing, see photo of browsing on ash sapling below. In Cole wood damage is high due to the high population in that area.
	Coppice	n/a		No recent coppice present on the transect route, but at current activity levels this would be browsed.
	Bramble	M		Most bramble <50cm height/wisps, patches <1.2m height below canopy gaps, see photo below.
	Other			
Bark removed	Fraying	L/M	1/2	11 records on 3.7km transect = 3/km = L/M (1/km=L, >20/km=H). Fraying tends to occur in distinct areas where animals feel secure and will often be on 1 stem, if these are missed by the transect or direction of travel, this feature will be under recorded.
	Bark stripping			4 records on 3.7km transect = L (1/km=L, >5/km=H)
Browse line	Bramble	M	2	Little bramble present, see photos below
	Coppice/ standards	M/H		Hawthorn and ivy show hard browse lines as preferred food types, Cole wood showed hard browse lines on all species and 'basal' regrowth (stems growing from the base of trees/coppice stools), browse lines will be more visible later in the year when leaves present, see photographs below.
	Shrubs	M/H		
Broken stems		N	0	In my experience broken stems are seldom seen and are not a good indicator, however this has been left in the survey sheet for completeness but may skew results leading to a lower score than reality.
TOTAL SCORE		M/H	6/8	As for activity there are pockets of high damage which are clearly visible (see red 'H' on the map above) and areas of medium damage. As above damage to flora and browse lines are likely to be under recorded due to the time of survey.
Trend		N/A:1st survey		

Deer Impact and Activity Report – Template provided by the Deer Initiative

Other comments

Is there evidence of stalking occurring?	No
Are agricultural impacts occurring?	Likely to be damage on crops adjacent to Lodge Lane as deer move out of the woods to the south and across to the golf course where they graze on the greens and cause damage especially during the rut.
Are Deer Vehicle Collisions (DVCs) an issue?	Unknown; this area is bound by railway lines to the north and south which may reduce DVCs. However, as populations grow animals moving west will impact on Halfpence Lane as animals jump the stock fence adjacent to the road to reach Ashenbank Wood, and may also impact Cobhambury Road.
Next steps / recommendations?	Continue discussions with all landowners in the project area, sharing this report and increasing awareness of issues related to increasing deer numbers; habitat damage, potential welfare issues if numbers increase beyond food availability in semi-captive area due to railways/fences, future DVCs etc. Once understanding of these issues is increased start considering culling to reduce numbers, focusing on females where possible.

Deer Impact and Activity Report – Template provided by the Deer Initiative

Photographs taken during the survey: these are examples of features seen throughout the area; it is not practical to include photographs of every instance of activity/damage, this note applies to photographs for all sections of the report.

Woodland structure near the southern edge of Lodge wood; sycamore and ash high forest with some younger sycamore regeneration. The combination of shading and browsing appears to limit sapling regeneration, shrub layer and bramble growth. Dog's Mercury is just emerging.

Area outside the stock fence to the west of the quarry and 'The Vineyard'. Dense sweet Chestnut coppice with thick leaf litter, heavy shading as well as deer browsing resulting in a lack of sapling regeneration, shrub layer and bramble growth. High activity along the northern edge of this block of woodland (18 racks leading out onto the arable field to the north, near where 8 fallow were recorded on the night census of 8/3/22).

The photograph to the left is an example of browsing on bramble where all leaves are removed, the photograph to the right (taken in Crookhorn Wood) shows normal bramble with leaves intact.

As noted above under general notes, the high population of badgers present means that many racks are shared by badgers and deer, the presence of fresh deer slots on racks shows use by deer as well as badgers.

Deer Impact and Activity Report – Template provided by the Deer Initiative

Hawthorn is a preferred food as shown by the browsing on the basal regrowth from the base of the plant.

The photograph shows that the growing tip of this ash sapling has been browsed off at least 3 times, meaning that growth of saplings is restricted every year.

In a canopy gap in the south of Lodge wood bramble was present to 1.2m height and sycamore sapling regeneration to 60cm height, suggesting increased light levels allowed these plants to establish despite low/medium levels of deer browsing.

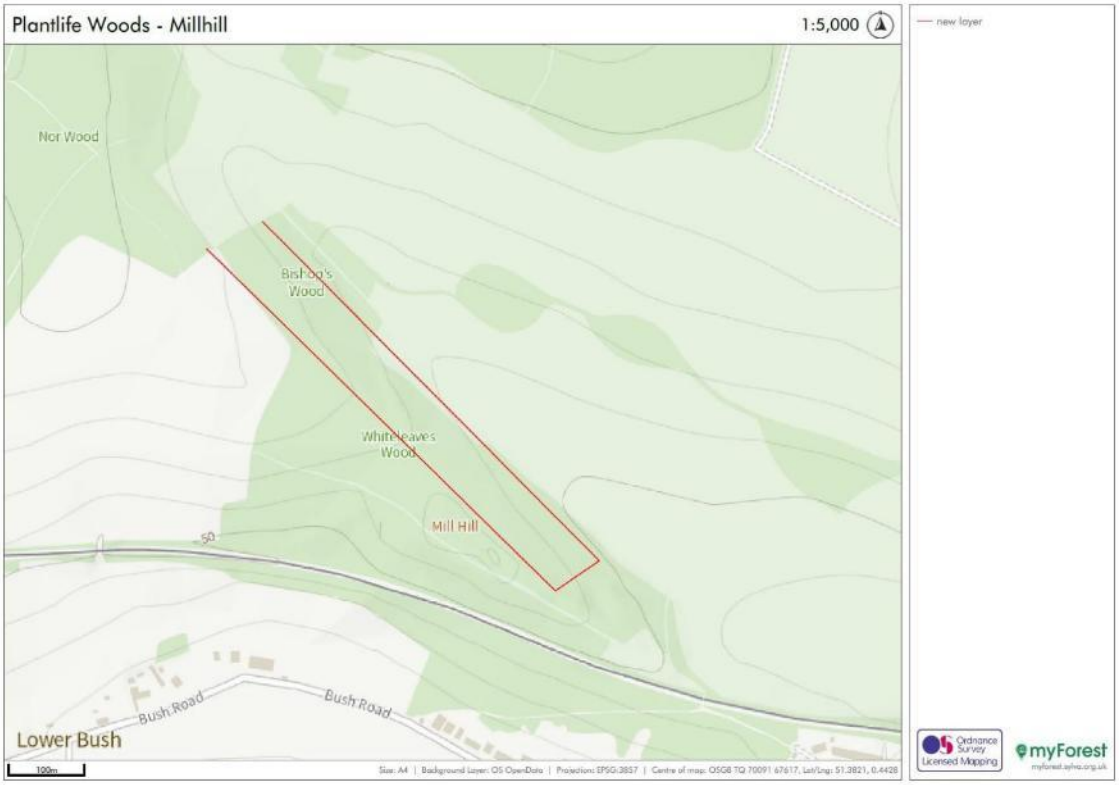
Only recent fraying is recorded in the survey as shown in the photograph above.

Deer Impact and Activity Report – Template provided by the Deer Initiative

	Ivy is a preferred food source, especially at the end of Winter and will often show browse lines even at lower activity/damage levels. The photograph on the left shows no obvious browse line on the southern edge of the disused quarry to the west of Lodge Wood, however the photograph to the right shows an obvious browse line on the southern edge of Nor Wood.
 This is actually the southern edge of Cole Wood, on the northern boundary of Cobham Park; a fallen branch covered with ivy has been stripped of all leaves and a clear fallow browse line is shown on the standing tree adjacent. Ivy is a preferred food of most deer, given the population of fallow on the golf course a 'hard' browse line is as expected on ivy.	 Southern edge of Cole Wood/northern edge of Cobham Park. Most trees and shrubs send up 'basal' shoots from their base, even under heavy shade. This photo shows how this basal growth has been browsed and kept to a low height by fallow browsing.
 Rack to the northwest of the PRoW adjacent to the main entrance to the golf course. Fresh deer slots are visible in the photograph.	

Deer Impact and Activity Report – Template provided by the Deer Initiative

Plantlife woodlands; Millhill (route taken shown in red on the map below).



Activity	Score (0-3)	Low Med High	Comments
Sightings of deer	0	L	
Slot marks	0	L	
Active pathways	0	L	
Droppings & scrapes	0	L	
TOTAL SCORE	0	L	Stock fenced on most sides with high access levels due to PRoW on all 4 sides, no activity seen, see photographs below.
Trend	N/A:1st survey		

Deer Impact and Activity Report – Template provided by the Deer Initiative

Damage		Low Medium High	Score (0-3)	Comments
Flora/grasses eaten		L	0	
Woody shoots eaten	Regeneration	L	0	
	Coppice	L		
	Bramble	L		
	Other			
Bark removed	Fraying	L	0	
	Bark stripping	L		
Browse line	Bramble	L	0	
	Coppice/ standards	L		
	Shrubs	L		
Broken stems		L	0	
TOTAL SCORE		N/L	0	As above no damage seen. Lack of sapling regeneration under closed canopy due to shading. See photographs below.
Trend		N/A:1st survey		

Other comments

Is there evidence of stalking occurring?	No
Are agricultural impacts occurring?	Surrounded by grassland but low activity and damage so unlikely to be impacts anyway.
Are Deer Vehicle Collisions (DVCs) an issue?	No.
Next steps / recommendations	If population pressure increases on adjacent land animals may find their way into Mill Hill, so continue to survey in the future.

Deer Impact and Activity Report – Template provided by the Deer Initiative

Photographs taken during the survey

Woodland structure in the central area of Mill Hill; little sapling regeneration >50cm present but this is likely to be due to dense shading.

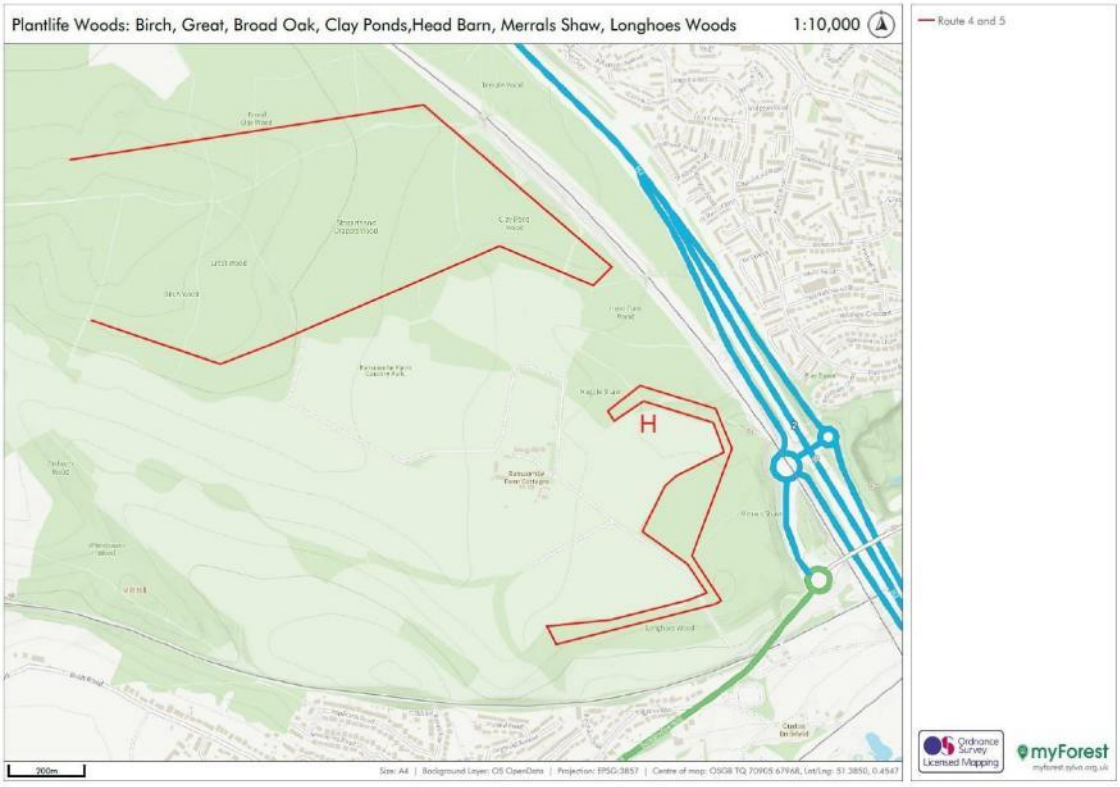
This coppice area showed bramble to expected height, coppice regrowth on hazel, which as a preferred food plant is often browsed even with low activity levels, sapling regeneration of silver birch in the background.

This recent ride-side hazel coppice stool shows strong regrowth with no browsing and sapling regeneration in the background.

No obvious browse line even on ivy.

Deer Impact and Activity Report – Template provided by the Deer Initiative

Plantlife Woodlands; Birch, Great, Broad Oak and Clay Pond woods (route taken shown in blue below), Head Barn Wood, Merrals Shaw, Longhoes Wood (route taken shown in red on the map below, with areas of high activity and damage marked by a red 'H'):



Activity	Score (0-3)	Low Med High	Comments
Sightings of deer	2	M	2 fallow deer were seen during the daytime survey in Great Wood, however 26 fallow were seen emerging from Birch/Great and Clay Pond Woods during the night census, combining the transect lengths for Birch/Great/Broad Oak/Head Barn/Merrals Shaw and Longhoes this gives 4.5 deer/km giving a medium score (>10/km = high).
Slot marks	2	M/H	Fresh slots on most racks, see photographs below.
Active pathways	2/3	M/H	13 racks/km within the woodland, however as previously noted dense sweet chestnut leaf litter obscures racks, and where visible, the frequency of use. 24 racks/km were recorded on the edge of Head Barn and Merrals Shaw giving a high score (>20/km = H).

Deer Impact and Activity Report – Template provided by the Deer Initiative

Droppings & scrapes	1	L	6 dung scatters/km (1/km = L, >30/km = H). See notes for dung counts in section 1. 1 scrape/km = L.
TOTAL SCORE	7/8	M	A medium score is recorded for the overall woodland area, however certain areas have high activity as shown on the map above by the red 'H', there may be other pockets of high activity that were not included in the transect.
Trend	N/A:1st survey		

Damage		Low Medium High	Score (0-3)	Comments
Flora/grasses eaten		L	1	Due to the time of the survey most flora hadn't emerged yet. Given that fallow consume 2 to 5.5kg of vegetation/day and activity levels are medium with pockets of high activity, it is likely that this low score is an under recording of damage. Surveys later in the year, once flora has emerged would show more accurate damage levels and are likely to show removal of flower (and therefore seed) heads, reducing flora populations over the long term. See notes in section 1 about exclosure plots.
Woody shoots eaten	Regeneration	M	2	Little/no sapling regeneration >50cm height of any tree species, see photographs below. As noted elsewhere this is partly due to shading as well as deer browsing.
	Coppice	M		Larger areas of coppice (>1ha) show regrowth with limited (<10%) browsing damage, whereas smaller ride-side or groups of coppice show medium to high levels (>30%) of browsing damage on preferred food types such as hawthorn and hazel. See photographs below.
	Bramble	M		Bramble appears to be restricted in height and spread below closed canopy, the photographs below show this is due to browsing as well as shading.
	Other			
Bark removed	Fraying	L	1	Fraying tends to occur in distinct areas where animals feel secure and will often be on 1 stem, if these are missed by the transect or direction of travel, this feature will be under recorded.
	Bark stripping	L		As above.
Browse line	Bramble	M	2	Leaves and growing tips browsed as per the photographs below.
	Coppice/	M		

Deer Impact and Activity Report – Template provided by the Deer Initiative

	standards			Clear/hard browse lines on preferred food types such as hawthorn and ivy throughout and partial browse lines on holly in Head Barn Wood where activity/damage is high. Browse lines will be clearer when leaves present.
	Shrubs	M		
Broken stems		L	0	See notes for this feature in section 1.
TOTAL SCORE		M	6	As for activity there are pockets of high damage which are clearly visible (shown by a red 'H' on the map above) and areas of medium damage. As above damage to flora and browse lines are likely to be under recorded due to the time of survey.
Trend		N/A:1st survey		

Other comments

Is there evidence of stalking occurring?	No
Are agricultural impacts occurring?	Yes, during the night census animals emerged from the shelter of the woodlands to feed on adjacent arable areas to the north and west of Ranscombe Farm, see night census map at the end of this report.
Are Deer Vehicle Collisions (DVCs) an issue?	Unknown; this area is bound by railway lines to the north and south with large embankments and possibly fences in the eastern corner adjacent to the roads, which may reduce DVCs. However as populations grow animals moving west will impact on Halfpence Lane as animals jump the stock fence to reach Ashenbank Wood and also and Cobhambury Road.
Next steps / recommendations.	See notes for section 1.

Deer Impact and Activity Report – Template provided by the Deer Initiative

Photographs taken during the survey: these are examples of features seen throughout the area; it is not practical to include photographs of every instance of activity/damage, this note applies to photographs for all sections of the report.

Sweet chestnut coppice with closed canopy in part of Birch Wood with low growing bramble below; shade is likely to restrict bramble growth but browsing is also likely to have an effect.

See photograph in 1st section for an example of bramble without browsed leaves.

All stems of this coppice stool have been browsed.

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The growth form of hazel is to send up 'basal' stems from the base of the plant, it will do this even under shade, being shade tolerant, here the basal regrowth has been browsed off, restricting its height, and on a wider scale removing the valuable, low growing shrubby layer in the woodland.

Browse line on hawthorn, only just visible as leaf burst occurs, hawthorn is a favoured food type and tends to show browse lines wherever present in these woodlands.

See photograph in 1st section for an example of bramble without browsed leaves.

Despite current activity levels, large coppice coupes show regrowth with <10% browsing across the area.

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See photograph in 1st section for an example of bramble without browsed leaves.

Patches of bramble below coppice with closed canopy.

Clear, 'hard' browse lines on ivy, where there was a pocket of high activity. This was supported by the results of the 2nd night census with 26 fallow deer seen

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on the open ground to the northwest of Ranscombe Farm, emerging from Clay Pond, Birch and Great Wood.	
 Woodland edges should be dense scrub/hedges due to high light levels and therefore plant growth, here frequent deer access into the woodland edge has left an eroded edge, with no dense, shrubby habitat. This high activity is shown on the map above by the red 'H'.	
  Deer slots are clearly visible on this frequently used rack.	  Longhoes shows similar features to Head Barn in terms of browse lines on hawthorn and ivy, despite racks being less

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	visible, however the 26 deer seen to the north west of Ranscombe Farm will obviously be moving through this area to graze and browse.
 A small area of recent coppice shows preferential browsing on hazel (right of the photograph) compared to the sweet chestnut (left of the photograph) which shows no browsing on regrowth. This preferential browsing on certain species over the long term alters species diversity and composition across woodlands.	 Woodland structure of closed canopy coppice with standards with little/no sapling regeneration, shrub layer or bramble and limited basal regrowth, however as noted above this is influenced by both shading and browsing/grazing.

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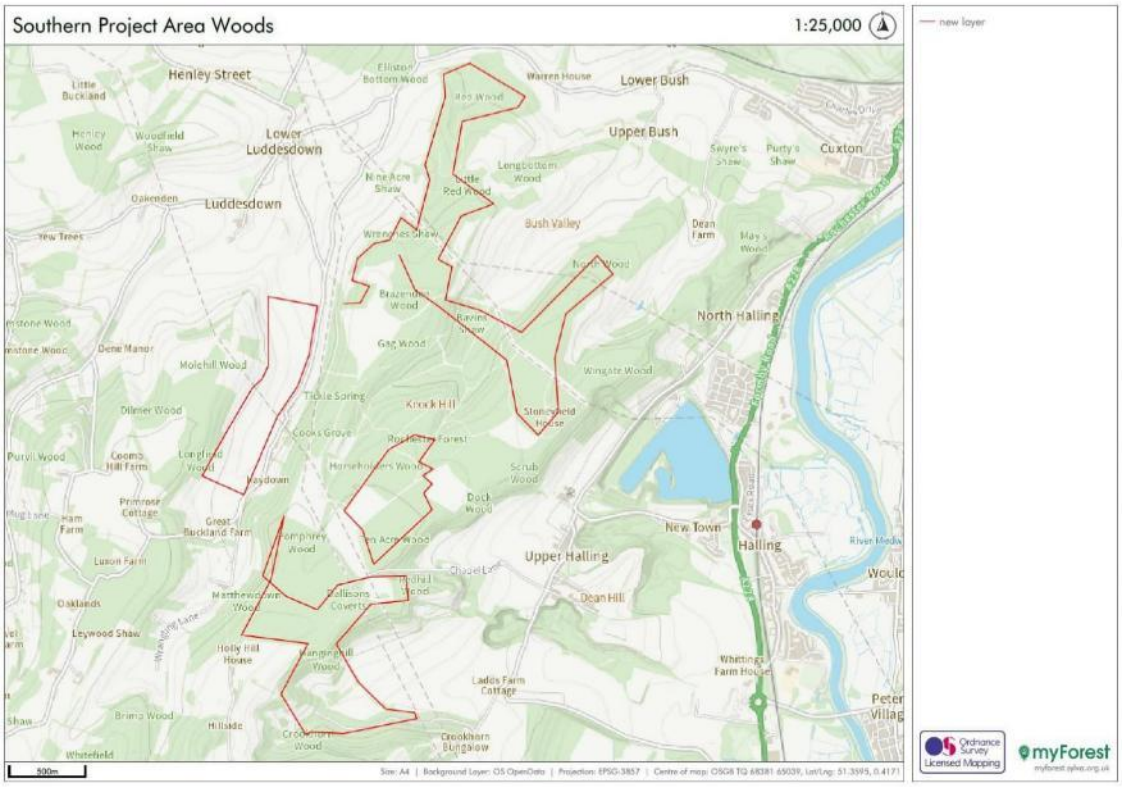
Southern project area: Cobhambury, Upper Bush, Hatch Hill (Upper Staple Hills, Scrubs Wood, Wrenches Shaw), Clarkes, Red, Little Red, Bushy, Halling, Home Bavins, North, Rochester Forest, Horseholders, Ten Acre, Great Buckland, Greatpark, Hanginghill, Crookhorn woods. Routes taken shown in red.



Activity	Score (0-3)	Low Med High	Comments
Sightings of deer	1	L	No deer recorded during daytime survey but 3 fallow deer recorded on 2nd night time survey on the north western edge of North Wood below near the overhead power lines.
Slot marks	1	L	Fresh slots from single animals across the survey area, see photographs below.
Active pathways	1	L	Between 3 and 8 racks/km but all lightly used hence recorded as Low (>20/km = high).
Droppings & scrapes	1	L	Fresh dung recorded in pockets of activity; on scrape in the north of Halling Wood (see photograph below) and Greatpark Wood (on edge of recent coppice). See notes in section 1 on recording this feature.
TOTAL SCORE	4	L	

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Trend	N/A:1st survey		Low level of activity throughout the area with pockets where what appears to be single animals are active, which is unusual for fallow deer and more common with other exotic species, but no evidence of these species were found and this was verified in discussions with local land managers and game keepers.

Damage		Low Medium High	Score (0-3)	Comments
Flora/grasses eaten		L	1	See notes in section 1 for this feature. Occasional browsing on wood sedge, see photograph below.
Woody shoots eaten	Regeneration	L	1/2	Pockets of sapling regeneration across the survey area, generally associated with canopy gaps and recent coppice. Under closed canopy sapling regeneration generally <50cm height. See photographs below.
	Coppice	L		Vigorous coppice regrowth of mixed species in recent coppice with <10% browsing, see photographs below.
	Bramble	M		Generally below expected height under closed canopy with browsing evidence in pockets of higher activity, see photographs below. To expected height in Ten Acre recently coppiced and in the thinned area.
	Other			
Bark removed	Fraying	L	1	On average 1 fraying record/km = low (>20/km = high).
	Bark stripping	L		<1/km = low
Browse line	Bramble	L	1	Bramble restricted in height where growth is weaker due to shading with evidence of leaves and tips browsed, see photograph below.
	Coppice/ standards	L		Evidence of basal browsing on preferred hawthorn throughout, with pockets of basal browsing on hornbeam and young yew, see photographs below. Mature hazel coppice shows younger basal growth that is not browsed. This shows that even at low levels of browsing/grazing damage there is an impact on the woodland habitat structure and species composition, through preferential browsing on certain species.
	Shrubs	L		
Broken stems		L	0	See notes for section 1 on this feature.
TOTAL SCORE		L	4/5	

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Trend	N/A:1st survey		Low levels of damage with pockets of higher damage where animals fray and browse on certain species, however as per notes above even at low levels of browsing/grazing damage, there is an impact on the woodland habitat structure and species composition through preferential browsing on certain species. As per notes for previous sections damage to flora is likely to be higher than recorded. Browse lines on broadleaved species will be more visible when leaves present.

Other comments

Is there evidence of stalking occurring?	No and verified by discussions with land managers and game keepers.
Are agricultural impacts occurring?	Possibly at low levels adjacent to woodland edges.
Are Deer Vehicle Collisions (DVCs an issue?	Unknown and unlikely at current populations, however as populations to the north increase and spread south through the woodland cover provided by this survey area, DVCs are likely to increase as animals cross small lanes from the cover of adjacent woodland, with no warning for drivers.
Next steps / recommendations	As per the notes for section 1 discuss this report with all landowners in the area so that awareness of future issues is introduced now. Encourage recording of deer activity and damage, as well as animals seen so that increases in these features are recognised before populations increase significantly.

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Photographs taken during the survey

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Upper Staple Hills Wood: in areas with medium to high activity there will often be a clear/hard browse line visible, for fallow this would be up to approximately 1.5m height. This picture shows this is not the case in this woodland, suggesting low activity and damage and/or enough higher value food within the area.

Upper Stable Hills Wood (southern edge): despite low activity/damage levels hornbeam coppice stools show little 'basal' regrowth from the base of the plant. This is also related to shading by the canopy however hornbeam is a shade tolerant species so regrowth should be present.

Upper Staple Hills Wood (north): very recent fraying/bark stripping shows fallow are present and active in the area, albeit at low levels. The background to the photograph shows the browsed growing tips of bramble, which means bramble will be restricted in its spread and height.

Upper Staple Hills Wood (north): as per the notes above basal browsing on hornbeam has limited the height of this regrowth to approximately 1.2m height.

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Fresh fallow slots west of Upper Staple Hills wood.

Upper Staple Hills Wood (north): mature yew tended not to show a browse line, suggesting low levels of activity/damage and/or better food sources elsewhere.

Wrenches Shaw (west): woodland edge showing little/no sapling regeneration >50cm height and little/no bramble growth, both features are often indicators of browsing damage, although shading can reduce both this should not be an issue on the woodland edge where side light is high. Wood spurge is clearly present as this plant is generally not browsed by deer.

Recent hazel coppice shows good regrowth, suggesting low levels of activity/damage.

Dense ride-side coppice regrowth shows little/no browsing damage, often these linear coppice areas are susceptible

Preferred pockets of activity as shown by the recent fraying on the young yew plant.

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to browsing due to their small area concentrating browsing damage, however this is not the case here.	
 Ivy shows partial browse line on wood edge, in late winter/early Spring this is a valuable food source and will often show browse lines even at low activity levels.	 Here mature yew does show a partial browse line, suggesting slightly higher activity/damage than Upper Staple Hills wood.
 Relatively young sweet chestnut coppice over low bramble with dense canopy. Likely that both browsing and shading restricts sapling regeneration and bramble height.	 Vigorous coppice regrowth with <10% browsing suggests low levels of activity/damage.
	

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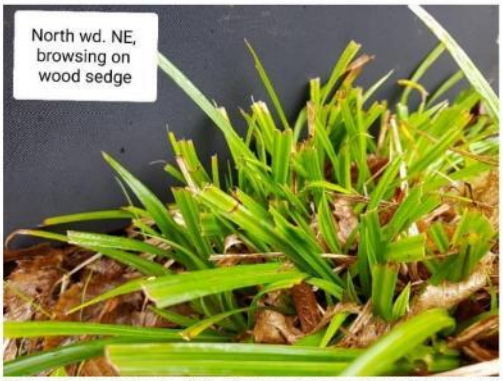
Overstood hornbeam coppice with little/no sapling regeneration and low, sparse bramble suggesting some browsing damage alongside shading.

Hawthorn is a preferred food here basal browsing and fraying are clear.

Although hard to see in this photograph this is a group of field maple sapling regeneration to 2m in height.



Damage to flora is difficult to estimate from DIAs carried out at the end of Winter/early Spring as little flora is present at this time of year. Also, if flora has been depleted through years of grazing (which for many plant species is the removal of flower/seed heads so that they cannot set seed and therefore populations reduce), DIA

Vigorous coppice regrowth of mixed species coppice suggests low damage levels.

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survey cannot detect this long term change. Exclosure plots will show this longer term change more effectively.	
	
 Bramble to expected height on ride-side suggesting that shading is suppressing bramble under woodland canopy.	
 Bramble present under thinned canopy.	 Coppice and bramble to expected height suggesting low activity/damage levels.

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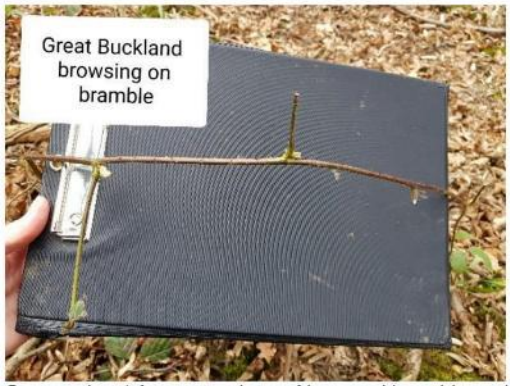
Field maple, hornbeam, hazel and sweet chestnut recent coppice regrowth showing <10% browsing damage.



See section 1 for comparison of browsed bramble and non-browsed bramble with all leaves intact.

Ivy stems with leaves retained to ground level, suggesting low activity/damage.

Honeysuckle tends to be browsed vigorously where activity is medium/high, here honeysuckle leaves are present to ground level, suggesting low activity/damage.

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Pheasant feeders provide a food source for deer so slots are often visible around feeders, here no obvious slots were seen, the ground was dry which makes slots less visible, but given the previous weeks wetter weather recent slots would have been visible.

Although little sapling regeneration or bramble is present there are younger basal regrowth stems on hazel, suggesting shading may be reducing saplings/bramble, because hazel is shade tolerant it has been able to send up young basal regrowth.

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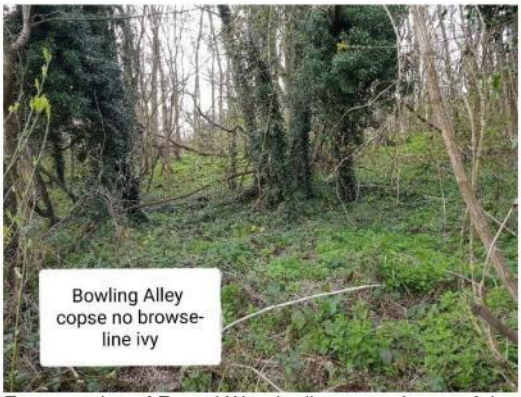
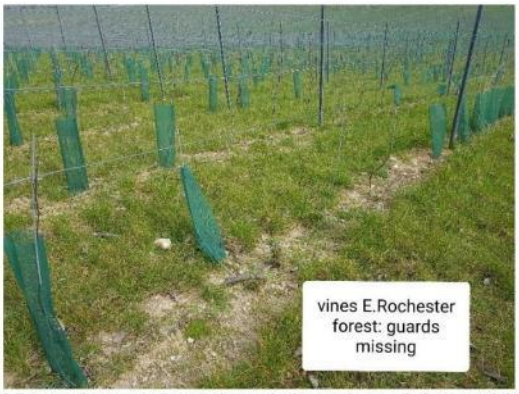
As per previous notes, hawthorn is a preferred food source, the browse line here is not very visible before leaf burst, but it is present.	
	 Although not particularly clear in the photograph, dense ash sapling regeneration is present in this canopy gap, suggesting low levels of activity/damage.
 Eastern edge of Round Wood adjacent and west of the vines in the Bowling Alley. No obvious browse line is present on ivy, which as a favoured food plant at the end of winter suggests low activity/damage levels in this area.	 Vineyard areas showed no obvious signs of deer activity and damage, no fresh slots, dung or fraying were seen adjacent to the vines in the Bowling Alley or the north-eastern edge of Bush Valley. One set of recent slots was seen on the south-eastern edge of the vines adjacent to Upper Staple Hills Wood. Although there were occasional areas where guards and vine plants were missing there was no evidence this was caused by deer activity, see photograph above. The woody nature of the vine plants at the end of Winter offers a poor food source. The DIA evidence aligns to the night census data in that only 3 fallow deer were seen with in the vines on the south-eastern edge of Bush Valley during the second night census. Surveying the vines when fresh leaves, or possibly even grapes are present may show activity and damage.

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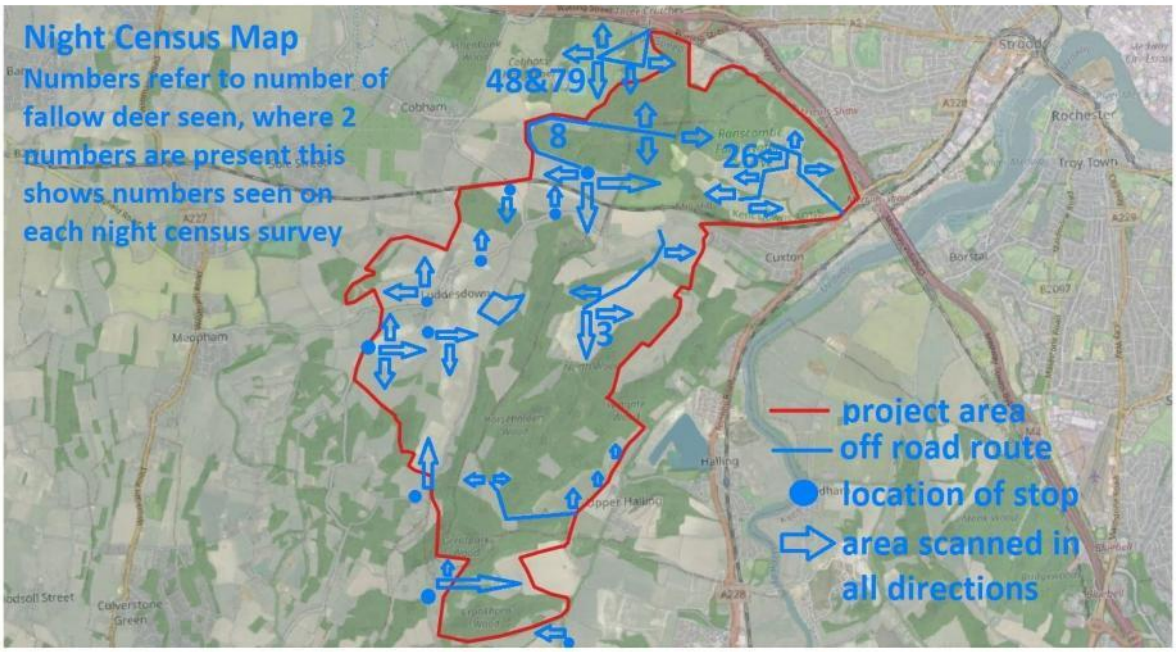


Badgers were numerous during the survey with 36 seen on the 1st night census including 15 on 1 field, 8 foxes, 69 rabbits and 3 hare were also recorded.

Appendix 2 – Deer population model – Fallow Deer

DEER POPULATION MODEL © 2008 The Deer Initiative. Note that the quality of the output depends on the quality of the input. Example only, may contain errors. The Deer Initiative accepts no responsibility for any actions taken as a result of using this model. **Please read the Instructions sheet (tab at bottom of model window) before using.**

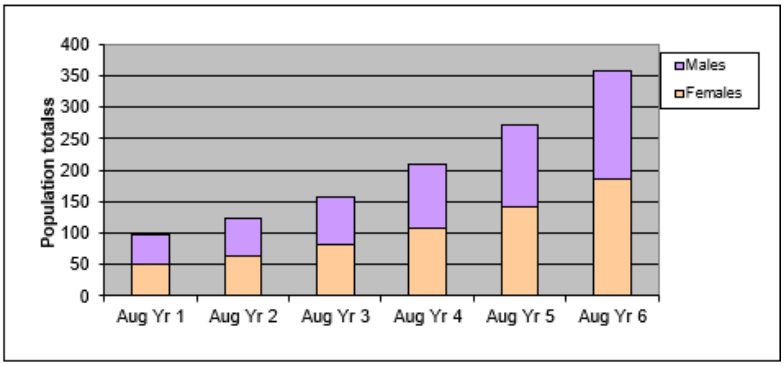
Parameters	Mortality rate %	Fertility Rate %
Adult Females >2 years	2	140
Yearling Females 1-2 yr	5	50
Female Young <1 year	10	0
Adult Males >2 years	5	
Yearling Males 1-2 yr	10	
Male Young <1 year	15	

Type your values into the yellow cells, copy them from the suggested values on the right, or move the sliders to adjust

Female fertilty
Y Female fertility
F Young Fertility
Female Mortality
Y Female Mortality
F Young Mortality
Male Mortality
Y Male Mortality
M Young Mortality

Starting population calculator

Estimated number of females (adults plus yearlings)		31
How many females to each adult male		1
Type these figures into first column of the model under Aug YR 1.	Females	23
	Y Females	8
	F Young	18
	Males	23
	Y Males	8
	M young	18



Model

	Aug Yr 1	Cull	Remainder	Mortality	Remainder	Aug Yr 2	Aug Yr 3	Aug Yr 4	Aug Yr 5	Aug Yr 6
Females	23		23	1	22	30	43	54	71	95
Y Females	8		8	0	8	16	15	21	29	37
F Young	18		18	2	16	17	23	32	41	54
Males	23		23	2	21	28	39	49	63	82
Y Males	8		8	1	7	15	14	20	27	35
M young	18		18	3	15	17	23	32	41	54
TOTAL	98	0	98	9	89	123	157	208	272	357

Appendix 3 – Deer population model – Muntjac Deer

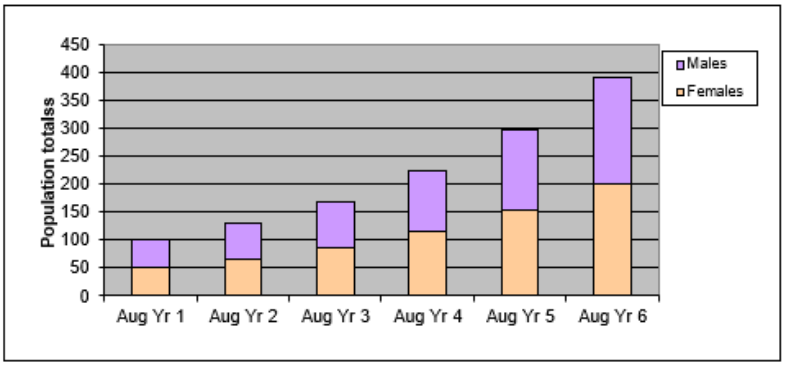
DEER POPULATION MODEL © 2008 The Deer Initiative. Note that the quality of the output depends on the quality of the input. Example only, may contain errors. The Deer Initiative accepts no responsibility for any actions taken as a result of using this model. **Please read the Instructions sheet (tab at bottom of model window) before using.**

Parameters	Mortality rate %	Fertility Rate %
Adult Females >2 years	2	150
Yearling Females 1-2 yr	5	60
Female Young <1 year	15	5
Adult Males >2 years	5	
Yearling Males 1-2 yr	10	
Male Young <1 year	15	

Type your values into the yellow cells, copy them from the suggested values on the right, or move the sliders to adjust

Female fertilty
Y Female fertility
F Young Fertility
Female Mortality
Y Female Mortality
F Young Mortality
Male Mortality
Y Male Mortality
M Young Mortality

Starting population calculator		
Estimated number of females (adults plus yearlings)		31
How many females to each adult male		1
Type these figures into first column of the model under Aug YR 1.	Females	23
	Y Females	8
	F Young	20
	Males	23
	Y Males	8
	M young	20



Model

	Aug Yr 1	Cull	Remainder	Mortality	Remainder	Aug Yr 2	Aug Yr 3	Aug Yr 4	Aug Yr 5	Aug Yr 6
Females	23		23	1	22	30	44	56	74	98
Y Females	8		8	0	8	17	16	22	31	40
F Young	20		20	3	17	19	26	36	47	61
Males	23		23	2	21	28	41	52	68	90
Y Males	8		8	1	7	17	16	22	31	40
M young	20		20	3	17	19	26	36	47	61
TOTAL	102	0	102	10	92	130	169	224	298	390