

Appendix VI: Deer Management Plan

- Deer Management Plan – Cruach Tarbeirt and The Cobbler
- Cowal & Trossachs Deer Management Plan



Deer Management Plan (DMP) – Cruach Tarbeirt and The Cobbler

Background

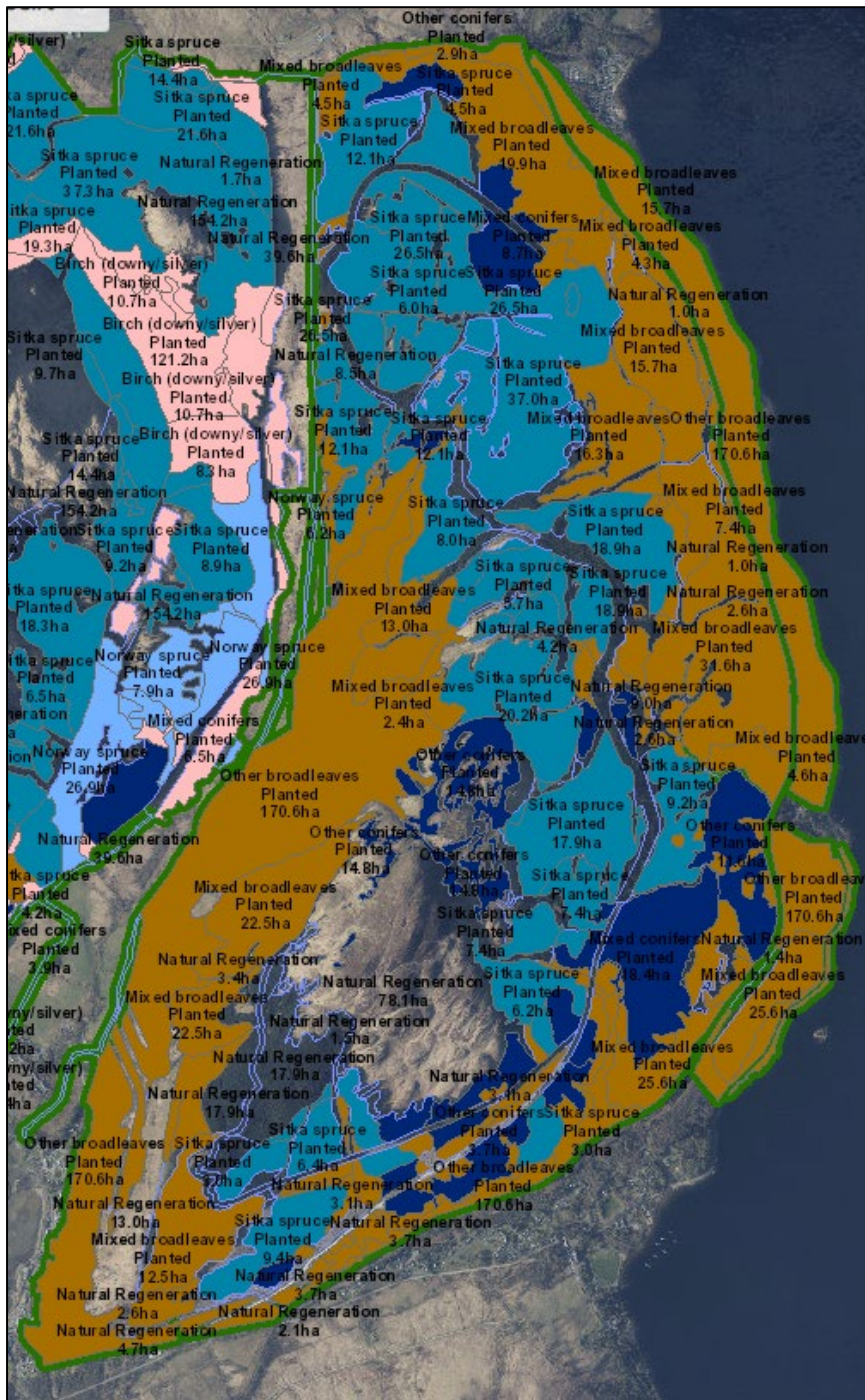
This DMP should be used as a supporting document/annex for the Land Management Plan (LMP). The DMP should also relate/be used in conjunction with FLS Deer Management Strategy.

National & Local objectives

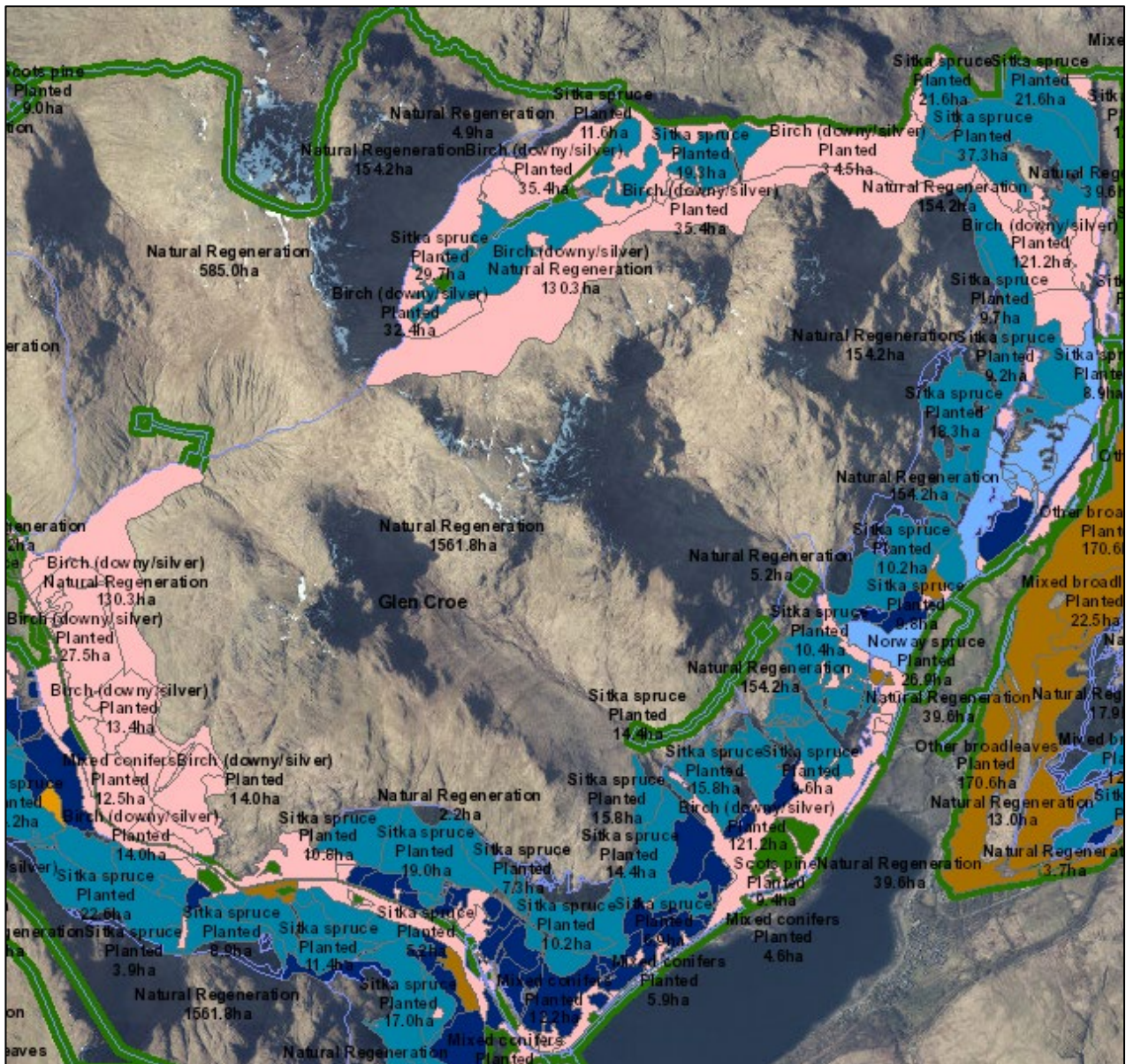
- Local and National objectives should be linked in here.
- National
 - Contributing to [Scottish Forestry - Forestry Strategy](#) (also includes Climate Change)
 - Deer Management Strategy [Deer management strategy - Forestry and Land Scotland](#)
 - Scottish Biodiversity Strategy [Biodiversity strategy: consultation - gov.scot \(www.gov.scot\)](#)
- Local
 - Cowal & Trossachs Deer Management Plan (appended at the end of this document)

What are we going to protect?

1. **Cruach Tarbeirt.** At the time of writing the block is a mixture of first and second rotation, mainly **commercial woodland**, and is diverse in structure and age class. Large areas of Larch have recently been removed due to infection with PR. Future plans for the block sees more than 50% of the block being planted in **Mixed Broadleaves** with some areas left open for natural regeneration. This will lead to increased biodiversity within the block and will thus shift deer management's focus from protecting a commercial crop to protecting the biodiversity within the area. The open hill above the tree line will remain unchanged. To protect the future softer and more palatable tree species **deer densities will have to decrease to below 3 deer/km².**



- Cobbler (Glen Croe).** At the time of writing the block is a mixture of first and second rotation, mainly **commercial woodland**, and is diverse in structure and age class. Future plans for the block sees a lot of commercial crop being replaced with **Birch and a small area of Norway Spruce**. Again, this will lead to increased biodiversity within the block and will thus shift deer management's focus from protecting a commercial crop to protecting the biodiversity within the area. With the future plans to increase softer and more palatable tree cover **deer densities will need to decrease to below 3 deer/km²**.

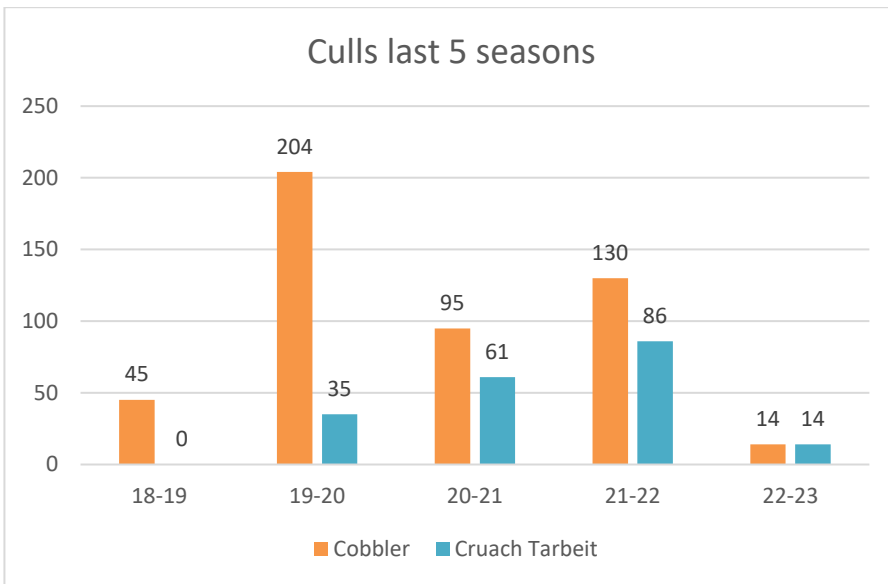


Deer Species (and other herbivores/feral pigs)

- Red and Roe deer are found within the DMP area.
- Some stray livestock are found on the Cobbler and the Wildlife Team is actively working with all neighbours to remove the sheep.

What have we done to date?

- Cruach Tarbeirt used to be a recreational stalker permission but is now managed by a Wildlife Management Contractor. The Cobbler was previously managed by FLS Rangers, however due to staff shortages this area is now managed by a Wildlife Management Contractor.
- Below is a table showing the culls for the last 5 seasons.



- No NN surveys have been done for the areas within this DMP.
- Reports from our current and previous Wildlife Management Contractors are that a reduction in deer numbers are seen within the DMP area. This has not been verified by FLS due to the difficult terrain of the area. It is FLS's view at this time that the Wildlife Management Contractor has not spent enough time in the DMP area to make this judgement and the lack of time spent is seen in the 22-23 cull.
- Future plans include a complete survey of the DMP area using thermal drone technology which will clearly indicate deer densities. This will be done in March 2023.
- **Current deer densities estimated to be around 10 deer/km². This is based on what is seen elsewhere in the district and professional judgement. This number can be much lower also.**

Geography

- The terrain within the DMP area is steep and mountainous.
- Access onto the open hill is largely by ATV tracks which can become unpassable in bad weather. Once on the open hill access is through open ground and experienced ATV operators are vital.
- No recent H&S concerns raised by Wildlife Management Contractor.

Have an evidence based approach

- FLS use an information based decision making process to set its deer management operations with the data received from varies internal and external reports and include;
- Thermal drone counts
- Herbivore dung counts
- Historical cull data

- Near neighbour cull and sighting data
- Ranger daily/monthly reports
- Deer Management Contractor daily/monthly reports
- Helicopter counts
- WRM surveys
- Survey data are independently obtained – i.e. Deer density figure, impacts - NN/HIA, SDA, etc.
- All data obtained are then combined as best possible and applied to a population model which is used to set culls.

Link to Deer Dashboard

- Most of data is used to create this DMP can be found in the Deer Dashboard, please see a link below. Currently only available to FLS staff, however to be made public soon.
- <https://fls.maps.arcgis.com/apps/MapSeries/index.html?appid=19d7887f055f469e9e472b5fec0d0630>

Population Modelling and Future Culls

- Due to the lack of thermal drone counts, dung counts or helicopter counts within the DMP area we are using professional judgment to lead us in our population model. Future plans include a complete thermal drone count of the area and will lead to more concrete cull setting. The area has not previously been surveyed heavily due to the nature of the block being mature commercial crop, however as stated above with the future plans for the block this will need to change.
- **The current cull for the DMP area is set at 191 for the 2023/24 season.** Please see population model below for 5 year cull.
- Deer densities are set to reach 3 deer/km² by 2027, however following thermal drone surveys in March 2023 we will be adjusting the population model accordingly.

Deer Population Model:

Financial Year (FY)	Population at 1st April (Start FY)	Population at 1st April (Start FY)	Total Population	No per 100ha 1st April	Kid % of pop at 1st April	Recruitment Female	Recruitment Male	Total Recruitment	Est Annual Mortality/Immigration %	Female Immigration/mortality	Est Annual Mortality/Immigration %	Male Immigration/mortality	Female pop 31st Aug	Male pop 31st Aug	Population 31st Aug	No per 100ha 31st Aug	Set % Cull	Female Cull	Male Cull	Total Cull
Yr1	199	199	398	10.0	40	40	40	80	0	0	0	0	239	239	477	12.0	40.0	95	95	191
Yr 2	143	143	286	7.2	40	29	29	57	0	0	0	0	172	172	344	8.6	40.0	69	69	137
Yr 3	103	103	206	5.2	40	21	21	41	0	0	0	0	124	124	247	6.2	40.0	49	49	99
Yr 4	74	74	148	3.7	40	15	15	30	0	0	0	0	89	89	178	4.5	55.0	49	49	98
Yr 5	40	40	80	2.0	40	8	8	16	0	0	0	0	48	48	96	2.4	55.0	26	26	53

How will objectives be met? Staff, contractor?

- The DMP area will be/am currently being managed by a Wildlife Management Contractor.
- Wildlife Management Contractors are qualified to Deer Stalking Certificate levels 1 & 2. In addition they are required to carry out an annual firearms skills test, ensuring the highest levels of safety and competency when undertaking their duties. Wildlife Management Contractors are supported by a Wildlife Ranger Manager and Area Wildlife Manager.
- Contractors are selected after satisfying FLS of their competence via a competitive tender. This work is arduous and critical to the success of the impact reduction strategy and only very experienced and appropriately qualified contractors are considered. All Wildlife Contractors have the same qualifications as FLS Wildlife Rangers and compliance and H&S are continually monitored by the Wildlife Ranger Manager.
- Out of season shooting is an essential tool in the protection of vulnerable tree crops and natural habitats. This is conducted either under the General License issued by NatureScot for enclosed woodland or by 5(6) authorisation on application to NatureScot for un-enclosed woodland. Male deer of all species will be shot year round on FLS land following permission, the shooting of females out of season will be limited to the periods 1st of September to 20th October and from the 16th February to the 31st March. When early out of season shooting of females is carried out any dependent young will be shot first.
- Night shooting is permitted by the Deer (Scotland) Act 1996 as amended by the Wildlife and Natural Environment Act 2011 (WANE Act), under section 18(2) authorisations granted by NatureScot. Applications for night shooting will only be made where unacceptable levels of damage would occur, and where the use of all other legal means of control, including out of season shooting have been considered. Operational dates for night shooting will be kept under review and can be changed should circumstances dictate. All operations will conform to current Best Practice Guidance and a copy of the guides will be held at the district office and issued to Wildlife Rangers as necessary. Night shooting is a valuable tool in areas of high deer management pressure where the population has become wise to deer management practices.

Infrastructure? Roads/ATV tracks/glades/larders/equipment

- At the moment a new road is being built in Cruach Tarbeirt to aid in removal of Larch infected with PR. The wildlife team have made plans to create ATV tracks from this new road which will increase the ATV access onto the open hill.
- Deer glades has been left to grow over with regen in recent year which has led to less open areas to shoot deer. However, the future plans for this block involves a great deal of felling and restock which will open the area up and create shooting opportunities. It is vital that at the restock phase the wildlife team is involved in planning so that open areas can be maintained as much as possible.

- Flailing of the road's edge can also increase visibility of deer and vegetations clearance has been added to the upcoming financial year's budget.
- FLS Wildlife Contractors have to following kit to their disposal:
- 4 x 4 vehicle
- Capstan which and rope to aid in extraction when far away from roads.
- 4 x 4 ATV with winch.
- Trailer to transport ATV.
- Slee Sledge/hill trailer to aid in extraction using the ATV.
- Deer legal caliber rifle with high magnification scope. Some have smart scopes where applicable.
- Binoculars.
- Handheld thermal imager to increase herbivore detection.
- Various knives, saws and PPE.
- One deer larders within the area with a total capacity of 88 deer.

Collaborative working opportunities

- A meeting has been set by the WRM and Forester for the area with the immediate neighbours to discuss the removal of stray livestock from the DMP area. The aim of the meeting is the create a "group" that can quickly react to any further stray livestock entering the DMP area and will aid in other collaborative work also.
- Some of the neighbours have client based stalking and FLS will seek to work with them to increase their client opportunities as we have been doing in other areas such as North Katrine.
- The FLS larder at Glenbranter is set to be enlarged in April 2023. We will see an increase in capacity of 75 which will almost double the larder size. Our hope is that the increased capacity will allow us to offer larder space to our neighbours in the area and will include the DMP area's neighbours. With more larder space available we are hoping to see an increased cull on neighbouring land.

DMG present

- The DMP area is included in the Inveraray & Tyndrum Deer Management Group (ITDMG).
- The DMG functions well and collaborative working is a real option.

Venison

- FLS subscribe to the Scottish Quality Wild Venison (SQWV) scheme. This sets the standards for our larders and actions of our staff to ensure we provide a safe food item to market.
- All venison is quality assured and sold to Highland Game where it is further processed.
- Cowal has 1 deer larder with a capacity of 88 Red deer. An additional chill unit is being added to this larder in the summer of 2023 which will increase the capacity to 120 Red

deer and will aid in collaborative deer management with neighbours within the larger area.

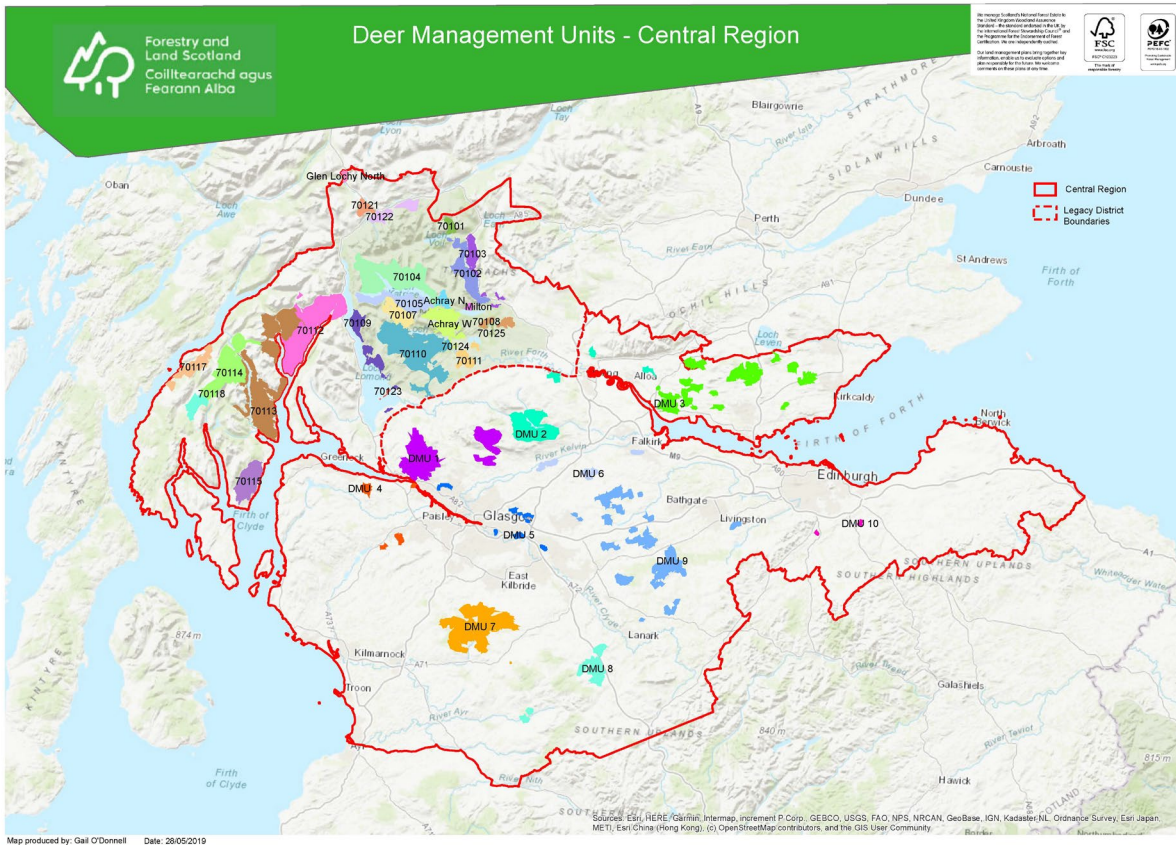
- All waste from the larders are removed by a licensed waste disposal contractor.
- All animal by-products are sold to Highland Game along with the venison.
- Venison are also sold privately from the Aberfoyle larder under our Venison Dealer's license.



Forestry and
Land Scotland
Coilltearachd agus
Fearann Alba

Cowal & Trossachs Deer Management Plan

Central Region Boundary Map



Cowal & Trossachs area of Central Region:

In 2018 Cowal and Trossachs FD and Scottish Lowlands FD were amalgamated in to one Central Region. This deer management plan(DMP) will be relevant to Cowal & Trossachs (C&T) only which lies largely to the North and West of Central Region as shown on the map above. C&T is largely a mountainous area covering much of the Loch Lomond National Park an area known for its scenic beauty attracting large numbers of visitors each year.

C&T covers an area of around 66000 hectares of which around 35000 is woodland with the remaining 31000 being open land and mountains and includes 22 Deer Management/ Wildlife management units as listed in the table below.

Deer Management Objectives

The main objective of deer management within Cowal and Trossachs area of Central Region is to manage deer populations at a level that is compatible with FLS environment and other management objectives. This means that we aim to prevent unacceptable damage to commercial tree crops and in key areas to maintain or enhance biodiversity and protect all designated sites. This will be done in a professional, humane and cost effect way, ensuring the physical wellbeing of the remaining deer populations within the forest boundaries. Venison income will be optimized and opportunities to create revenue from recreational deer management permissions (RDMP) will be taken, but without compromising the over-riding issue

of minimizing negative impacts by grazing herbivores. This strategy should be read in conjunction with OGB 5, OGB 5a and OGB14 Deer Management of the National forest Estate, Wild Deer Best Practice and Scotland's Wild Deer a National Approach.

- Achieve less than 10% leader browsing damage on all P1 coupes.
- Ensure SDA year 1-5 meet the OGB 4 objectives. 2500 per hectare.
- Lower deer densities to 2-7 per km² to ensure the above objectives can be met sustainably.
- Ensure all designated sites are in favourable condition.

How will our objective be achieved?

FLS use an information based decision making process to set its deer management operations with the facts received from various internal and external reports and include,

- C&T NN report 2020 of 8% damage with a 3 year rolling average of 12%
- Glenbranter forest blocks around 30 deer per km².
- Lochard forest block 25 per km².
- Over 50% of designated sites require further improvement to meet the objectives.
- Observations from staff and contractors.
- Helicopter surveys.
- Historic Culls
- Due to the current impacts by herbivores being above target we will need to continue to increase culls.
- FLS policy is to increase culling and reduce the need for deer fences.

With The above information considered FLS has set out its future cull plans in C&T as per the table below.

C&T DMU's & WMU's

The table below shows a list of all DMU/WMU broken down into individual forest blocks, the resource responsible for the block and the previous year's cull followed by the following years planned culls covered by this plan. Although the table outlines which FLS staff member will be responsible for wildlife management in each forest block FLS staff will be resourced with deer culling contractors to help achieve the set cull targets.

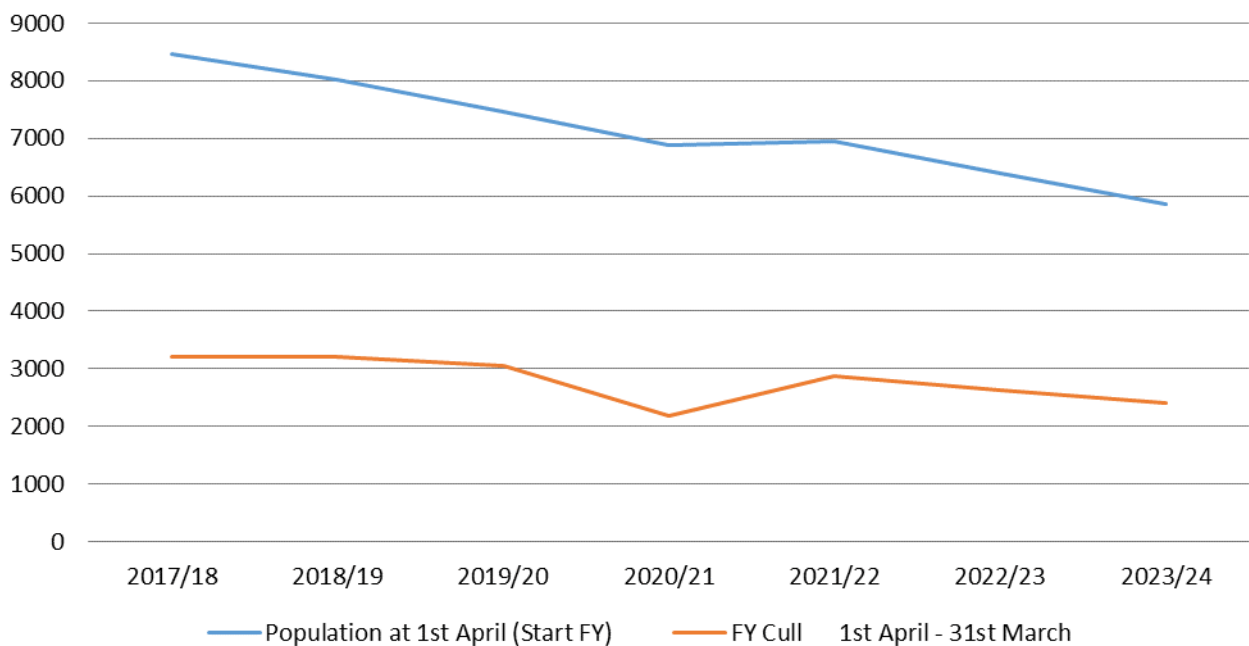
Cull Targets

DMU/WMU Name	Forest Block Name (SNH Control Areas)	WR	18/19 Cull	19/20 Cull	20/21 Cull	21/22 Cull	22/23 Cull
ARDGARTAN	ARDGARTAN	Contract	247	300	300	300	300
	COBBLER	Contract	45	70	80	80	80
	CRUACH TAIRBET	Permission	46	70	80	80	80
	BUTTER BRIDGE	Contract	0	0	0	0	0
CORLARACH	CORLARACH	Contract/ J Clark	181	250	250	250	250
EAST LOCH ECK	BEN LAGGAN	Contract/ A Clark	67	80	80	80	80
	DRUMSYNIE	Contract	35	100	100	100	100
	GAIRLETTER	J Clark	156	175	175	175	175
	EAST LOCH ECK	Contract/ J Clark	191	220	220	220	220
	LETTERMAY	Contract	99	120	120	120	120
GLENBRANTER	GLENBRANTER	A Clark	398	300	450	500	500
	MASSAN	Contract	34	50	50	50	50
	STRATH NAN LUB	D Tyler	53	60	60	60	60
	PAPERCAVES	A Clark	3	10	10	10	10
STRATHLACHLAN	STRATHLACHLAN	Contract/D Tyler	91	100	100	100	100
	LEANACH	Contract/D Tyler	21	30	30	30	30
GLENDARUEL	GLENDARUEL	D Tyler	65	70	100	100	100
			1732	2005	2205	2255	2255
ACHRAY	ACHRAY	SM	333	350	350	350	350
	MILTON	SM	8	10	10	10	10
BALQUIDDER	KIRKTON	AW	48	50	50	50	50
CRANLARICH	BENMORE	AW	117	120	120	120	120
	INVERARDRAN	AW	43	50	50	50	50
EAST LOCH LOMON	BALMAHA	DC	10	15	15	15	15
	NTS	DC	0	5	5	5	5
	PTARMIGAN	DC	98	100	100	100	100
	ROWARDENNAN	DC	142	140	140	140	140
	ROSS PRIORY	DC	17	20	20	20	20
	STRATHCASHELL	DC	22	30	30	30	30
EWICH	EWICH	AW/RE	10	10	10	10	10
FLANDERS	FLANDERS EAST	RE	35	40	40	40	40
	FLANDERS WEST	RE	21	30	30	30	30
	CARDROSS	RE	0	20	20	20	20
LEDARD	LEDARD	AF	89	100	100	100	100
LOCH ARD	LOCH ARD	DC	552	600	600	600	600
NORTH KATRINE	NORTH KATRINE	AF	569	550	550	550	550
SOUTH KATRINE	SOUTH KATRINE	AF	89	100	100	100	100
STRATHYRE EAST	STRATHYRE EAST	AW	88	100	100	100	100
	CALLANDER CRAGS	AW	11	15	15	15	15
	LENY BLOCK	AW	12	20	20	20	20
STRATHYRE WEST	STRATHYRE WEST	AW	177	200	200	200	200
	COILLEHALLAN	AW	3	10	10	10	10
	STRONVAR	Sold	0	0	0	0	0
Shannochill	Shannochill	SM	2	5	5	5	5
Rynaclach	Rynaclach	Framework	0	5	5	5	5
LETTER	LETTER	DC	50	50	50	50	50
	TORRIE	DC	38	50	50	50	50
	WESTER TORRIE (NP)	Framework	8	10	10	10	10
			2592	2805	2805	2805	2805
			4326	4865	5015	5065	5065

Red deer population Model

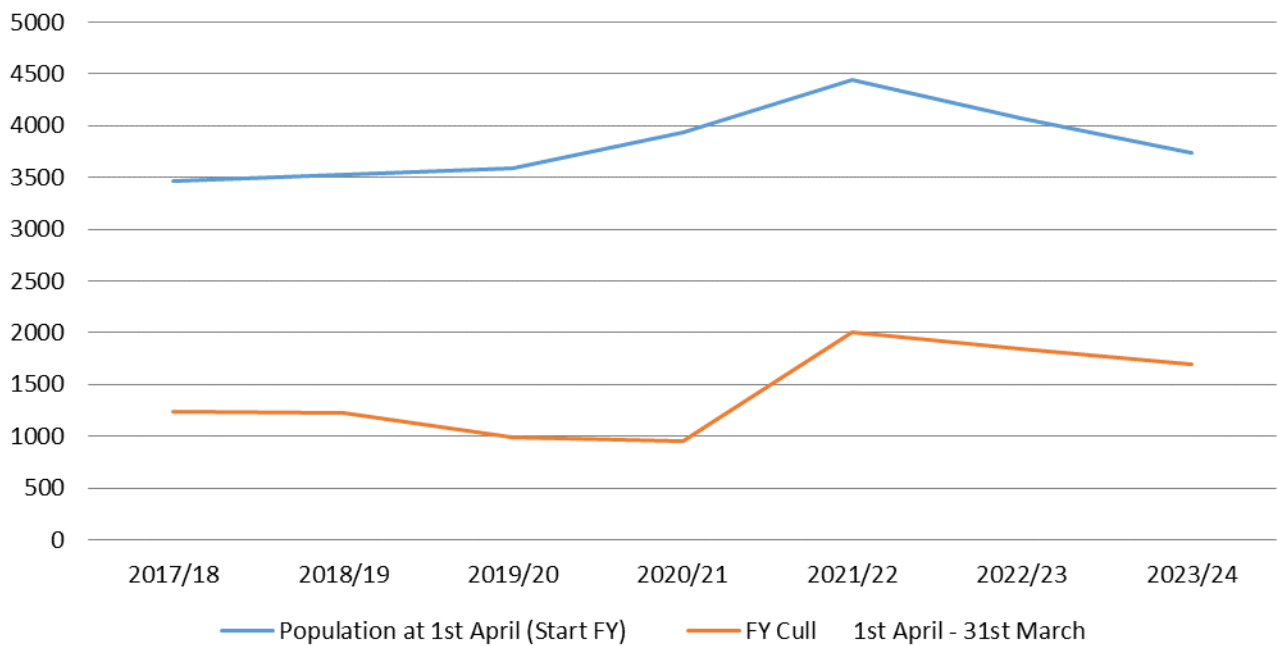
The population models have been built using historical cull data and recruitment data retrieved from the deer dash board. This population model will help guide C&T over the next 5 years with culling setting targets to help ensure FLS objectives will be met whilst also ensuring the cull is sustainable.

Financial Year (FY)	Population at 1st April (Start FY)	No per 100ha 1st April	Kid % of pop at 1st April	Recruitment	Immigration % of pop at 31st Aug	Immigration	Population on 31st Aug	No per 100ha 31st Aug	Set % Cull	FY Cull 1st April - 31st March	% Cull achieved	Population on 31st March (End FY)
2017/18	8452	12.6	30	2536	3	254	11241	16.8	0.0	3218	29	8023
2018/19	8023	12.0	30	2407	3	241	10671	15.9	0.0	3201	30	7470
2019/20	7470	11.1	30	2241	3	224	9935	14.8	0.0	3059	31	6876
2020/21	6876	10.3	30	2063	3	206	9145	13.6	0.0	2185	24	6960
2021/22	6960	10.4	30	2088	3	209	9257	13.8	31.0	2870	31	6387
2022/23	6387	9.5	30	1916	3	192	8495	12.7	31.0	2633	31	5861
2023/24	5861	8.7	30	1758	3	176	7796	11.6	31.0	2417	31	5379
2023/25	5379	#DIV/0!	30	1614	3	161	7154	#DIV/0!	32.0	2289	32	4865
2025/26	4865	#DIV/0!	30	1459	3	146	6470	#DIV/0!	33.0	2135	33	4335



Roe Deer population model

Financial Year (FY)	Population at 1st April (Start FY)	No per 100ha 1st April	Kid % of pop at 1st April	Recruitment	Immigration % of pop at 31st Aug	Immigration	Population 31st Aug	No per 100ha 31st Aug	Set % Cull	FY Cull 1st April - 31st March	% Cull achieved	Population at 31st March (End FY)
2017/18	3469	5.2	32	1110	5	173	4753	7.1	0.0	1232	26	3521
2018/19	3521	5.3	32	1127	5	176	4823	7.2	0.0	1230	26	3593
2019/20	3593	5.4	32	1150	5	180	4923	7.3	0.0	991	20	3932
2020/21	3932	5.9	32	1258	5	197	5386	8.0	0.0	948	18	4438
2021/22	4438	6.6	32	1420	5	222	6080	9.1	33.0	2007	33	4074
2022/23	4074	6.1	32	1304	5	204	5581	8.3	33.0	1842	33	3739
2023/24	3739	5.6	32	1197	5	187	5123	7.6	33.0	1691	33	3432
2024/25	3432	#DIV/0!	32	1098	5	172	4702	#DIV/0!	34.0	1599	34	3104
2025/26	3104	#DIV/0!	32	993	5	155	4252	#DIV/0!	35.0	1488	35	2764



Health and Safety

The safety of all staff and the public will be paramount in everything we do. The use of firearms, ATVs, lone working in remote often harsh locations and in all weathers, brings with it a number of hazards. By ensuring we have a well-trained, well equipped workforce and by the use risk assessment, safety checks and good communication we will seek to minimise the risk to all.

Deer Species

C & T's woodlands are home to Red, Roe and Fallow. Red are the predominant species with Roe and then a small population of Fallow centered on east Loch Lomond. Sika have been seen and shot in very small numbers. To try and prevent but certainly slow the spread of sika, they will be controlled rigorously, fully in keeping with the Scottish Natural Heritage (SNH) and Forestry Commission Scotland (FCS) policy on sika deer.

Deer Management Groups

Liaison with neighbours is essential to the cost-effective implementation of FLS deer management objectives. The C & T deer management team will be active participant in local deer management groups. Such groups provide a forum for explaining and gaining acceptance of FLS policy and for agreeing forms of mutually beneficial co-operation with regard to deer management matters. An open, honest approach will be taken with attempts made to promote a good understanding of the professional approach to deer management in our forests. There are currently three DMGs active within the C & T boundaries – Inveraray/Tyndrum, Balquhiddy and Glen Artney. The Cowal DMG is in the early stages of reforming.

Wildlife Rangers

C & T currently employs 7.5 fulltime wildlife rangers (WR). The WR are managed by two Wildlife Ranger Managers (WRM) the WRMs in turn report to the Delivery Manager.

Deer Management Permissions

The Issuing of permits to cull deer, to suitably qualified permit holders, assists with overall deer control and with reducing costs. One permissions is operation in C & T. Careful consideration is given to this system ensuring that targets and acceptable damage levels are not compromised. Cull targets will be provided annually and monthly progress monitored. The C&T considers its position frequently and as permissions come to a close. Permissions are managed in line with FLS policy.

Contract Deer Cullers

Contract Deer Cullers are used as necessary to complement the directly employed WRs. All Contractors are selected after satisfying FLS of their competence via a competitive tender. This work is arduous and critical to the success of the impact reduction strategy and only very experienced contractors will be considered.

Out of Season Shooting

Out of season shooting is an essential tool in the protection of vulnerable tree crops and natural habitats. This is conducted either under the General License issued by SNH for enclosed woodland or by 5(6) authorisation on application to SNH for un-enclosed woodland. Decisions to shoot out of season will be made on an individual DMU/WMU basis, where it is believed that serious damage would occur if this step were not taken. While male deer of all species can be shot year round if permission is granted, the shooting of females out of season will be limited to the periods 1st of September –20th October and from the 16th February to the 31st March. When early out of season shooting of females is carried out any dependent young will be shot first.

Night shooting

This is permitted by the Deer (Scotland) Act 1996 as amended by the Wildlife and Natural Environment Act 2011 (WANE Act), under section 18(2) authorisations from SNH. Applications for night shooting will only be made where damage would occur and where the use of all other legal means of control, including out of season shooting have been considered. Operational dates for night shooting will be kept under review and changed should circumstances dictate. All operations will conform to Best Practice Guidance and a copy of the guides will be held at the district office and issued to Wildlife Rangers as necessary.

Fencing

FLS policy on deer fencing will be as per OGB5 and the Joint Agency Statement & Guidance on Deer Fencing. Boundary fences bordering deer range will be maintained where necessary. Neighbours will be expected to meet their legal obligations. Perimeter deer fencing should not be maintained for the sole benefit of a neighbour. Internal fences may be used to protect sizeable areas of vulnerable species or where opportunities to shoot are limited by high public usage. Internal fencing should be the exception rather than the rule.

Ranger Training

FLS seeks to maintain a highly skilled Wildlife Ranger force. All Wildlife Rangers are qualified to Deer Stalking Certificate 1 & 2. Annual Firearms Skills Testing and the Wildlife Ranger Self Checklist and WRMs 1, 2, 3, & 4 are carried out at the required intervals and are part of the resumption system. Additional training requirements are identified through the PMS and ILP systems.

Nature Scot (NS)

Regular close liaison with NS and the regional NS Wildlife Officer will be a high priority with assistance being sought where problems exist. It will be vital that NS supports action on any contentious issues. FLS assists with the fallow deer counts and culls on the SNH owned islands on Loch Lomond.

Waste Management

Animal waste at point of kill (gralloch) will be left on site taking account of OGB5a and avoiding watercourses, public paths etc. Animal by products from the deer larder will be disposed of via a licensed waste contractor using the FLS central contract. Disposal in an emergency situation for example if a larder chill breaks down and a large number of carcasses must be disposed of will be via the Approved Waste Contractor requesting an emergency uplift.

Future Actions

- Monitor deer density in conjunction with NN Damage Assessment and SDA results.
- Liaise with Operational Staff over budgets and planning.
- Liaise with Operational staff throughout the crop rotation.
- Liaise with the Environment team regarding deer impacts on other habitats.
- To improve ATV access throughout the forest area to allow for efficient deer management.
- Liaise and collaborate with neighbouring deer management groups, the national park authority and other stakeholders to help ensure sustainable and collaborative deer management is achieved.

Review

This DMP will be reviewed annually or as required should policies change.

