



Scottish Natural Heritage
Dualchas Nàdair na h-Alba

All of nature for all of Scotland
Nàdar air fad airson Alba air fad

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Licensing Arrangements for Shooting Birds to Prevent Serious Damage to Fisheries

GUIDANCE NOTES FOR SALMON AND SEA TROUT FISHERIES

Power to grant licences

1. Scottish Natural Heritage has authority under section 16(1)(k) of the Wildlife and Countryside Act 1981 to grant licences to permit the killing or taking of wild birds for the purpose of preventing serious damage to fisheries. If the killing complies with the terms of such a licence then the prohibition in section 1 of the Act will not apply. In Scotland Scottish Natural Heritage is the licensing Authority for licences to shoot birds which damage fisheries.

Arrangements for the granting of licences

2. Scottish Natural Heritage has made the following arrangements for the granting of licences:

2.1 licences relating to the shooting of birds for the protection of salmon or sea trout fisheries will normally only be granted to, or through, local District Salmon Fishery Boards. Licences for the protection of the other fisheries will normally only be granted to the owner or occupier, where there is no District Salmon Fishery Board;

2.2 licences will only be granted where alternative non-lethal methods of control have proved unsuccessful or impractical. **Even where a licence has been granted, shooting should be undertaken in the first instance to scare rather than kill**, where this is a feasible option;

2.3 for predation occurring, or likely to occur, in open water systems (rivers, lochs, or reservoirs), applications for licences will normally be considered to shoot cormorants (*Phalacrocorax carbo*), mergansers (*Mergus serrator*) and goosanders (*Mergus merganser*).

2.4 normally licences will only be issued for a specified period between 1 September and 30 April; and

2.5 Scottish Natural Heritage will consult advisors from Marine Scotland and the Scottish Agricultural Science Agency (SASA).

Serious Damage

3. Evidence of serious damage occurring, or likely to occur, **must** be provided before consideration will be given to granting a licence, i.e. you **must** complete the instructions given in 3.1 and 3.2 below. Please attach all information as copies of actual records, or compiled information, to the back of the application form if necessary.

3.1 Evidence of damage or serious risk to fish stocks will normally include the following:

- species and life stage of fish requiring protection;
- records of catch returns for both 'fish taken', and 'fish released' for the system;
- if possible, an estimate of the numbers of adult fish likely to be spawning in the system. This may include information from fish counters, redd counts, electrofishing surveys, and traps;
- if possible, an estimate of the numbers of smolts or parr likely to be produced in the system. This may include information from electrofishing surveys and/or fish traps.

Careful distinction should be made between the answers to 5(c) damage to stock, (which, for example, might include taking of salmon smolts or parr), and damage to fishery, (which in the same example would include the effect on subsequent abundance of catches of adult salmon).

3.2 Evidence of impact of birds on the fishery will include regular bird counts.

3.3 Bird counts should take place once or twice per season for larger river catchments, or monthly for smaller river catchments. In either case, it is important that counts are undertaken at the time of year that damage occurs. Please see **Annex A** for information on the methods used to count birds. **Annex B** includes a blank bird count recording form, and an example of how to complete the form.

Non-lethal methods used to deter birds

4. Licences to shoot piscivorous birds are granted only where there is no other satisfactory solution. At key times of the year, e.g. during the smolt run, fish may be more vulnerable to predation by birds, particularly where constrictions along the river system hinder the movement of the fish, or where fish naturally form dense shoals. Where it is practical, applicants should try to deter birds from taking advantage of such situations of high prey abundance by scaring birds from these areas in the first instance. Please detail the methods that have been used to try to deter birds from these sites. Please include the lengths of time during which various methods were operating. Bird deterrence at these sites can be achieved by the use of bird scaring devices. A *general* list of bird scaring devices is included.

4.1 Officials from Scottish Natural Heritage may visit the site of alleged damage during assessment of an application, in order to verify any information provided on the application form and to discuss, for example, any preventative measures currently employed or used in the past.

Fish conservation measures

5. For the purposes of background information only, please describe any policies that have been implemented or undertaken recently by the Board with the objective of enhancing fish production in the system, such as:

- restocking using egg, fry, parr or smolt. Please describe the type of restocking undertaken, the approximate numbers released, the costs of the restocking programme, and if possible, estimate the numbers of juvenile or adult fish produced as a result of the stocking programme;
- voluntary or compulsory restrictions in methods and/or catch and release policy: please give details, if applicable;
- the presence or purchase costs of netting rights on the river, estuary or nearby coastal areas;
- habitat enhancement measures, and the approximate costs of undertaking these methods.

Licence conditions

6. Licences, if issued will include a number of stipulations and conditions. These **must** be adhered to, and can vary from licence to licence. Scottish Natural Heritage has the power to revoke, without prior notice, any licences granted.

Offences

7. Under the Wildlife and Countryside Act 1981:

7.1 failure to comply with the terms of a licence may make the licensee liable to prosecution for an offence; and

7.2 applicants should also note that section 5 of the Act prohibits the use of certain methods of killing or taking wild birds: traps, snares, hocks, nets, bird lime and similar substances, electrical devices, poisonous and stupefying substances, bows and cross-bows, explosives other than fire-arm ammunition, shotguns with large diameter barrels, automatic and semi-automatic weapons capable of holding more than 2 rounds in the

magazine, illuminating and sighting devices for night shooting, artificial lighting, mirror and other dazzling devices, gas and smoke chemicals, wetting agents, sound recordings, tethered or maimed live birds as decoy and mechanically propelled vehicles in immediate pursuit.

When to apply for a licence

8. Anytime from July onward, bearing in mind that all licence applications **must** be submitted **at least 6 weeks prior to the requested start date of the licence**. Failure to adhere to this may result in any decision to grant a licence being delayed.

How to apply for a licence

9. Postal applications for a licence should be made on the appropriate form and sent to:

Licensing Section

Scottish Natural Heritage
Great Glen House
Leachkin Road
Inverness
IV3 8NW

Tel: 01463 725364

Email: LICENSING@snh.gov.uk

All applications should be accompanied by a map (of suitable scale), with the boundary of the fishery or fish farm clearly marked on it.

Further Information

11. Further information regarding licensing arrangements can be obtained from the address above.

ANNEX A

COUNTING METHODS FOR RIVERINE BIRDS

Essentially five methods of counting birds can be used:-

- simultaneous counting along defined stretches of the river;
- consecutive counting along defined stretches of the river;
- counts of defined stretches of river from vantage points;
- a combination of the above methods;
- counting at roosts.

SIMULTANEOUS COUNTS

1. Divide the river into sections of a size allowing safe walking or boating of each section.
2. Allocate each clearly defined section to people (“counters”) conducting the counts, making sure that they know *exactly* where their start and end points are.
3. Coordinate a start time, within the first hour after sunrise, for all people involved.
4. Working from the up-river end of their section, each set of counters should note the number of birds seen as they walk or boat down stream to their end point.
5. As the birds are disturbed, the counters **MUST** make a note of whether the birds fly up-stream, down stream or are ‘undisturbed’ (remain within sight of the counters such that they are confident that the birds will not be recounted). To avoid re-counting errors, the counters should try **NOT** to disturb the birds.
6. Note separately any birds you see flying overhead.
7. Get the counters to make a note of when they finish the count on their section of river.

CONSECUTIVE COUNTS

1. Divide the river into sections of a size allowing safe walking or boating of each section.
2. Allocate each clearly defined section to people conducting the counts (“counters”), making sure that they know exactly where their start and end points are. Where large stretches of the river are navigable by boat, it may be easier to conduct the count using just a few sets of counters working from a boat covering several sections of the river.
3. Get each counter to estimate the time it will take them to perform the count along their defined stretch of river. Allocate start times for all counters based on this, such that as one section of river is counted, the count begins on the adjacent, down-stream section of the river.
4. Each set of counters should note the number of birds seen as they walk or boat down stream to their end point.
5. As the birds are disturbed, the counters **MUST** make a note of whether they fly up-stream, down stream or are ‘undisturbed’ (remain within sight of the counters such that they are confident that the birds will not be recounted). To avoid re-counting errors, the counters should try **NOT** to disturb the birds.
6. Note separately any birds you see flying overhead.
7. If counters are covering several sections of river in their count, they should note the time on the recording form of when they pass particular land-marks on the river.
8. Get the counters to make a note of when they finish the count on their section of river.

COUNTS FROM VANTAGE POINTS

Where stretches of river are difficult to negotiate by foot or by boat, counts could be conducted from vantage points close to the river. A powerful telescope or binoculars will be needed. However, this method could result in overlooking birds that would have been detected if the counter were on the river or riverbank. Thus, it is better to conduct these vantage point counts during times of the day when the birds are most conspicuous, such as shortly after sunrise when they should be actively feeding. The advantage of this method is that disturbance of the birds may be reduced. These counts should aim to include all areas of the river system.

COMBINATION COUNTS

For larger rivers, it may be easier to conduct counts using a combination of the methods described above. For particularly large rivers or catchments, counts may have to take place over several days by one or a combination of methods. Ideally, count over several consecutive days, or over two or so weeks maximum depending upon the size of the catchment. Try to avoid bird migration periods (see 'Frequency of counts'). If possible, avoid days where weather conditions are very different from previous count days.

1. Divide the river into several large sections.
2. Within each large section, divide the river into smaller sections of a size allowing safe walking or boating of each section.
3. Conduct a consecutive count from the uppermost small section down through the remaining small sections within each large section.
4. Counts take place simultaneously across each large section.
5. Any stretches of river that cannot be counted on foot or by boat could be assessed from a vantage point if available.

ROOST COUNTS

During the winter, many bird species will roost communally on perhaps quieter sections of the river or on nearby reservoirs, lochs or lochans, or in suitable trees.

Roost counts should be conducted at dawn or around dusk.

For dawn counts, all counters should be in position by first light to monitor the birds as they leave the roost to start feeding. By sunrise, most birds would have left to feed.

Most birds return to their roost by sunset, which gives a short window for counting before light levels are too low for the birds to be seen.

KEY FEATURES OF THE COUNTS

Bird behaviour

Most birds usually start to leave their overnight roosts at first light, such that by sunrise, virtually all birds would have left. Typically, they will fly to a site to begin feeding, and foraging will often peak within the first few hours of the day. Adults may feed for just a few hours each day, although younger, less experienced birds may spend considerably more time feeding each day. For the purposes of protecting a fishery, it may be important to recognise whether a bird is roosting, feeding, loafing or performing some other non-feeding activity (preening, socialising, etc.).

Winter counts of sawbill ducks have tended to find the majority of the birds in the lower reaches of the river.

Errors

Under-counting and over-counting are both errors that are important to consider when estimating the number of birds using a river. Counts that are conducted along the course of a river could over-estimate the actual number of birds, due to disturbance causing the birds to fly to another part of the river in which other counts are taking place. Consecutive counts are better than simultaneous counts at reducing this error because you know that if the birds fly up-stream behind you, they will not be recounted. However, the assumption is that the birds will not be disturbed other than by the people undertaking the counting. Also, the best time to conduct a count is within the first few hours of the day, because this minimises the risk of disturbance by external factors. However, it is recognised that any count, particularly

one on a long river, is unlikely to be completed by any method during only these first few hours.

Extrapolated counts, where small sections of river are surveyed, and the number of birds counted along these small sections is multiplied by the entire length of the river, are not acceptable without prior surveys of the entire river, i.e. any extrapolation is validated (see ***Frequency of the Counts***).

Counting the birds at known roost sites eliminates these types of errors. However, unless *all* roost sites can be identified, the count could underestimate the number of birds present on a river. Furthermore, the assumption is that all birds from a particular roost will all use the same river system in which to feed. If there are limited alternative feeding sites within a relatively short distance of the roost, this may be case. However, it has been found that cormorants will range over quite large distances in order to feed.

Another avoidable error relates to identification of the correct species, in particular, distinguishing between goosanders and mergansers. All efforts must be made, using bird books and experienced bird watchers, to correctly identify the species. If you shoot a different, but protected species to that specified on the licence, you risk prosecution. If you are unsure, you may be able to identify the species using the British Trust for Ornithology website (<http://www.bto.org/birdfacts/>) or the Royal Society for Protection of Birds website (<http://www.rspb.org.uk/wildlife/birdidentifier/>). These sites will enable you to find the taxonomic name of the species. There are also many British bird identification books, and some will be available in your local library.

In order to prevent serious damage to your fishery, it is important that any large year to year changes in the size of the bird population in your catchment are identified. Scottish Natural Heritage must be able to compare the counts which take place over successive years, and to do this with any reasonable accuracy, **it is crucial that the method you FINALLY adopt to count birds along your river remains the same from year to year.**

Frequency of the Counts

River counts should ***ideally*** take place at least twice each licensing period (potentially from autumn through to spring). Once during the autumn or winter period, and if appropriate to your licence application, once during April, which for many rivers will coincide with at least part of the smolt run. Thus, you will be estimating the size of the over-wintering bird population, and also the breeding population. The number and distribution of birds on the river may vary during these different times of the year. In general, birds will migrate to their breeding grounds during March or April.

A count during April will generally be too late in the season for the issue of a licence, but this count will be used to assess your application for the following year. Counts in early April may be better than counts later in the month, since females might be incubating eggs at this time and could be missed in the count. However, early counts may underestimate the size of the population if birds are still migrating into the area to breed. Much will depend upon the weather conditions that spring, and whether birds are migratory or resident. Where resources are limited, at least one count should take place when most birds are present (usually during the winter period).

Once several counts have been conducted, it may be possible to identify specific areas with particularly high or particularly low bird densities. To reduce manpower requirements on the large river catchments, future counts could then be targeted to include only those areas with high bird densities. However, *counts would occasionally have to include **all areas of the catchment** to confirm that this pattern of bird distribution had not changed.*

Roost counts could take place more often, e.g. monthly, due to the relatively smaller amount of manpower and time required.

Manpower

Clearly considerable amounts of manpower are needed to conduct river counts. For this reason, it is useful to involve as many interested parties as possible. Local SNH staff and local bird recorders, may all be prepared to offer assistance with the counts. They may be able to identify local roost sites, will eliminate doubt regarding species identification, and can offer guidance on the behaviour of the birds. Also, by involving individuals in the counts, who are not directly associated with your Fishery Board, you are likely to avoid disputes over the numbers of birds seen at a later date.

Neighbouring Fishery Boards may also be prepared to assist you with counts on your river systems on a mutually agreeable basis.

BIRD COUNT RECORDING FORM

River Section: *Beat No 2... ..* Date: *12/10/2005.....*

Start point: *...The Briggan Inn.....* GRID REF: *NY.123.456.....*

Finish point: *..Craigie House Bridge.* GRID REF: *NY.789 000.....*

Count direction: Upstream / Downstream (delete as app.)

Start time: *...7.am.....*

Finish time: *...1pm*

Names of participants: *John Brown/Fred Bloggs*

Weather/river conditions: *Dry & Sunny/Normal*

KEY FOR BIRD ACTIVITY:

↑	Flew UP stream when disturbed
↓	Flew DOWN stream when disturbed
–	Was NOT disturbed (stayed within sight)
F	Birds already IN FLIGHT when seen

No. GOOSANDERS SEEN	BIRD ACTIVITY	TIME	No. MERGANSERS SEEN	BIRD ACTIVITY	TIME	No. CORMORANTS SEEN	BIRD ACTIVITY	TIME
2	↑	7.10	5	↓	7.15	3	↓	7.20
5	↑	8.15	3	↑	8.30	1	↑	8.35
1	F↓	9.00	1	F↓	9.10	4	↑↓	8.24
1	↑	9.50	6	↑	10.20	2	F↑	10.00
6	↑	11.25	4	↑	11.15	1	↑	11.45
		<i>Passed</i>	<i>Inverbeauty</i>	<i>Bridge</i>	<i>at</i>	<i>11.47</i>		
1	F↓	11.50	2	↓	12.05	3	↑↓	12.15
2	↑	12.25				3	↓	12.20
2	↑	12.40				1	F↓	12.30
						1	↓	12.45