

Natural England

Wildlife Management & Licensing



Topic Licensing the shooting of cormorants to prevent serious damage to fisheries and inland waters

Issue Setting the upper limit for the number cormorants that may be shot under licence.
Period: 31 August 2007 and 30 August 2008

**14 January
2008**

Cormorants, like all wild birds, are protected under the Wildlife and Countryside Act 1981 and cannot be killed, or their eggs or nests (when in use or being built) taken or destroyed, except under the authority of a licence.

Nevertheless, cormorants can cause serious problems at fisheries and fish farms by damaging stocks of fish and by reducing catches. There are a number of legal measures, such as fish refuges or deterrents, that fisheries can employ to reduce predation, but these do not always succeed in reducing damage to acceptable levels. Where this is the case, measures that are ordinarily illegal, such as shooting, may be justified. It is Natural England responsibility to assess applications for licenses to permit such measures to be undertaken for the purpose of preventing serious damage to fisheries and inland waters in England.

Why is there an upper limit?

The total number of cormorants that may be shot under licence each year to prevent damage to fisheries in England is limited to ensure that collectively, licensed killing does not lead to a long-term population decline.

This upper limit is set by Natural England in accordance with policy set by the Department for the Environment, Food and Rural Affairs.

Each application for a licence to shoot cormorants to prevent serious damage is assessed on its own merits. However, the number of birds that a successful applicant will be permitted to shoot will take account not only the specific circumstances of that case (for example, level of damage reported and number of cormorants foraging at the fishery), but also the upper national limit.

This year's upper limit

The number of cormorants that may be killed between 31 August 2007 and 30 August 2008 will be subject to an upper limit of 1800 birds.

In the preceding licensing year, 2178 cormorants were licensed to be shot, and of that total, 1458 were reported shot.

The number of cormorants licensed to be killed is kept under review and the annual upper limit may be revised within season.

Further information

Further information on the setting of the upper threshold is given in the following Annex.

Advisory leaflets, application forms and further information on licensing are available from the Natural England website: www.naturalengland.org.uk/conservation/wildlife-management-licensing or via the Enquiry Service: 0845 600 3078.

ANNEX

Rational for the threshold decision

Licensing policy for cormorants

Licences to protect fisheries are issued under section 16(1)(k) of the Wildlife and Countryside Act 1981 (as amended). A copy of the Act, which sets out the purposes for which licences may be issued, is available online at www.statutelaw.gov.uk.

Licensing is carried out in accordance with the agreement on the discharge of wildlife management functions between Natural England and Defra¹. This agreement sets out the respective responsibilities of Defra and Natural England, and establishes a requirement for Natural England to have regard to strategic policy statements published by the Department. On the specific issue of the number of cormorants that may be shot under licence, Defra states

The number of cormorants which could be killed

*Natural England must set a prudent national upper limit to ensure that licensed removal does not irreversibly affect the conservation status of the species. This must be evidence based and should take full account of the Central Science Laboratory cormorant model which will include data on the actual number of cormorants that have previously been killed under licence. Data from the model will be made available to Natural England. **

**Note: To date under this policy up to 2,000 cormorants may be killed under licence each year (16 April to 15 April) nationally (with scope for up to 3,000 for a “short period”). This equates to about 11% (or 18%, if 3,000 birds) of the English over-wintering population. The evidence base supports this number and the expectation is that unless new data comes to light which clearly outweighs the present data, the prudent upper limit will continue at this level.*

Setting the threshold

In setting the upper limit, Natural England is expected to satisfy two key policy objectives established by Defra. To recap, these are

1. licensed killing should not irreversibly affect the conservation status, and
2. the upper limit should only deviate from 2,000 p.a. if there is clear evidence justifying a change.

Licensed shooting under the current policy is considered to be of sufficient magnitude to influence the cormorant population nationally. This is a unique situation for a native species and makes the threshold level decision particularly significant.

Natural England consider that the over-wintering population average for the period 1996-2000 is an appropriate reference level for threshold setting. Annual licensing levels will be adjusted so that the population maintains a five-year average equal or greater than this level.

If evidence (e.g. from the Central Science Laboratory model) indicates that culling up to 2,000 birds per year will result in cormorant numbers declining below the 1996-2000 reference level then this will be considered sufficient grounds to adjust the annual threshold downwards. If the population increases to a level similar or greater than the peak observed in 2003 then the higher (3,000 birds per year) threshold may be permitted.

There will be a presumption against making large annual adjustments in the threshold to minimise the impact of changes on fisheries trying to manage predation problems. Instead, modest changes phased over several years will be the favoured approach to maintain the population at or above the reference level.

State of the cormorant population

The cormorant is amber^a listed in *Birds of Conservation Concern* because the breeding population is concentrated at a small number of sites and because the UK supports more than 20% of the

^a The amber listing means that it is a species of “moderate conservation concern”

European non-breeding population². The population in England has increased by about 60% since 1987³ and now stands at about 25,175 birds^b. The population peaked at about 30,500 birds in 2003, and has since declined by about 18%, so that it is now close to the population average for period 1996 – 2000 (23,959 birds; Figure 1).

The cormorant model

The Central Science Laboratory (CSL) have modelled the consequences of the licensing policy on the cormorant population since 2004 when Defra increased the maximum number of cormorants that could be shot under licence each year from 500 to up to 3,000 birds. Outputs from this model are used to inform licensing policy⁴.

The modelling output provided by CSL this autumn is summarised in Table 1. Two different index values for the population are used for reference; these are the population estimate for 2003 (when the population peaked) and the population average for the period 1996-2000 (which is being used as a reference for threshold setting).

Predictions are provided for a series of different cull levels for the current season, ranging from 0 to 3000 birds. In summary, the model predicts that if there is no licensed shooting then the population is expected to increase by about 2% this year, but would decline by more than 5% if 2000 birds are shot. Five hundred birds could be shot without an anticipated change in the population.

Since the model is predicting very similar index levels to those observed in the field, it seems likely that licensed culling is significant factor contributing to the change in population since 2003.

Table 1

Comparison of observed (WeBS) and modelled population estimates for cormorants in England and population predictions based on different cull levels.

Licensing year (31 Aug to 30 Aug)	Population estimates		Population estimates as a percentage of two index values, for observed and (modelled) values	
	Observed	Modelled	2003 peak index	1996-00 av. index
2003/4	30501	30501	100 (100)	127.3 (127.3)
2004/5	28819	28810	94.0 (94.5)	120.3 (120.2)
2005/6	25175	25818	82.5 (84.6)	105.1 (107.8)
2007/8 predictions				
3000 birds shot		23061	(75.6)	(96.3)
2000 birds shot		24153	(79.2)	(100.8)
1600 birds shot		24736	(81.1)	(103.2)
1300 birds shot		24980	(81.9)	(104.3)
1000 birds shot		25133	(82.4)	(104.9)
500 birds shot		25804	(84.6)	(107.7)
0 birds shot		26383	(86.5)	(110.1)

Licensing threshold for 2006-07

The cormorant population index is now about 5 percentage points above the 1996-2000 reference level. The model predicts that shooting 2000 birds this winter would result in the population reaching the reference level by next year. In these circumstances, a reduction in the upper limit to below 2,000 birds is considered justified.

To allow the population to stabilise around the reference level and to avoid the need to make large changes in the upper threshold each year, which could present difficulties for fisheries managers, an upper level for licensed shooting will be set that will aim to achieve a modest reduction in the

^b WeBS data provide an index of population size, however, population estimates can be extrapolated (see reference 4 for explanation) and such estimates are presented here.

actual number of birds shot, with the intention of making further adjustments in following years, if required.

Therefore, the **upper limit for the number of birds licensed to be killed between 31 August 2007 and 30 August 2008 will be set at 1800**, which represents a reduction of about 400 birds on the 2006/07 season (Table 2). Since 2004 between 63-72% of the total number of birds licensed each year have been reported shot, so approximately 1300 birds are expected to be killed this season, thus providing a modest reduction in the number shot of about 150 compared to 2006/07.

The annual figure for numbers licensed to be killed is kept under review and may be revised within season.

The future

The aim will be to make available the decision on each year's threshold prior to the main licensing period (which commences on 1 September) each year. This undertaking is dependent on timely receipt of population and modelling data.

References

¹ Agreement between Natural England and Defra on the discharge of wildlife management functions: www.defra.gov.uk/wildlife-countryside/vertebrates/pdf/wma.pdf

² Anon. The population status of birds in the UK: birds of conservation concern: 2002-2007. available from: www.bto.org/psob/bocc%202.pdf

³ Wetland Bird Survey (WeBS) British Trust for Ornithology: www.bto.org

⁴ Smith, CG, Parrott, D. and Robertson, PA (in press) Managing wildlife populations with uncertainty: cormorants, *Phalacrocorax carbo*. *Journal of Applied Ecology*.

Matthew Heydon

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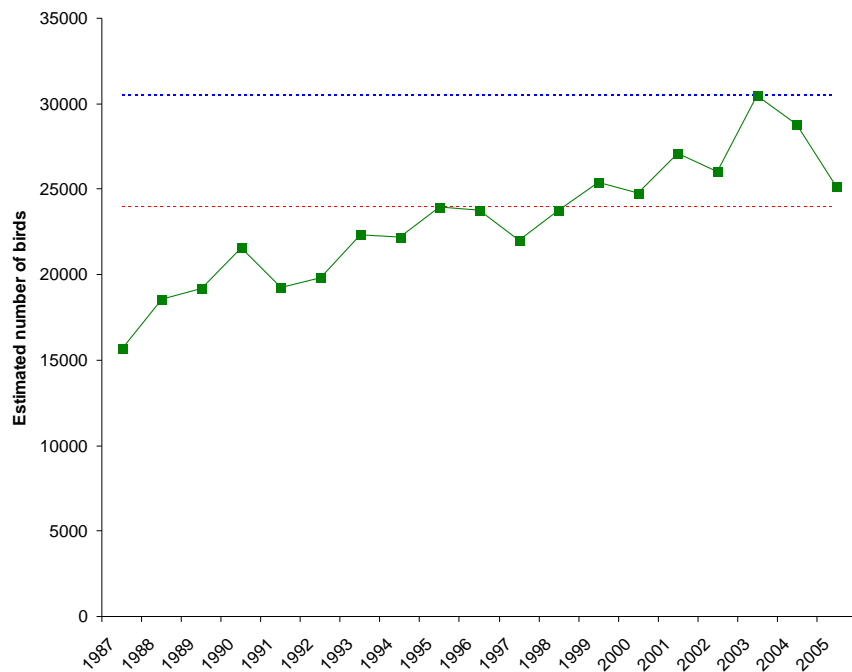
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Email: wildlife@naturalengland.org.uk

Website: www.naturalengland.org.uk

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Figure 1 The cormorant population of England estimated from BTO WeBS data



..... 2003 population estimate
 1996–2000 population average

Source of data for Figure 1: British Trust for Ornithology Wetland Bird Survey
 Source of data for Figure 2 & Table 2: Natural England and Defra

Figure 2 The number of cormorants licensed to be shot and the number reported shot each year for England since 2001

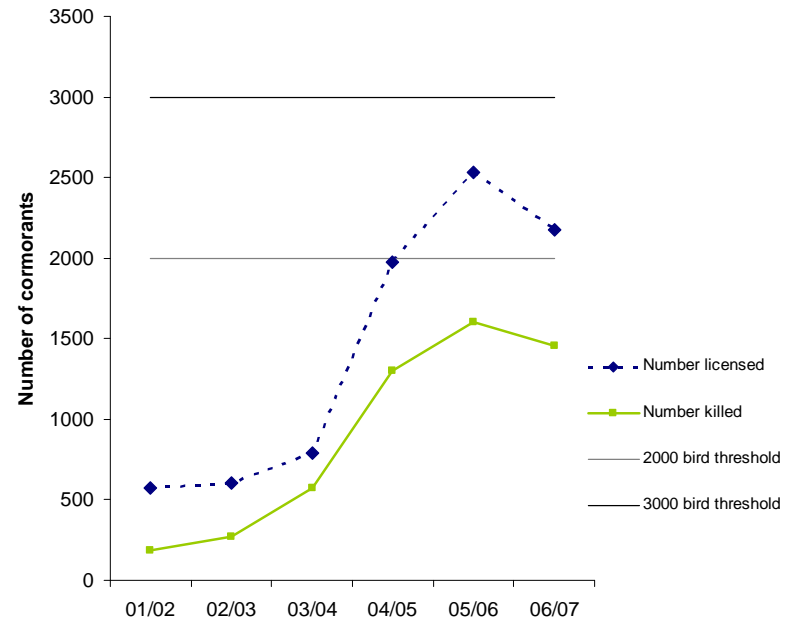


Table 2

Year (Aug 31 – Aug 30)	Bird licensed to be shot	Number reported shot	% of licensed reported shot
2001/02	570	189	33.2
2002/03	603	273	45.3
2003/04	790	570	72.2
2004/05	1972	1299	65.9
2005/06	2529	1603	63.4
2006/07	2178	1458	66.9