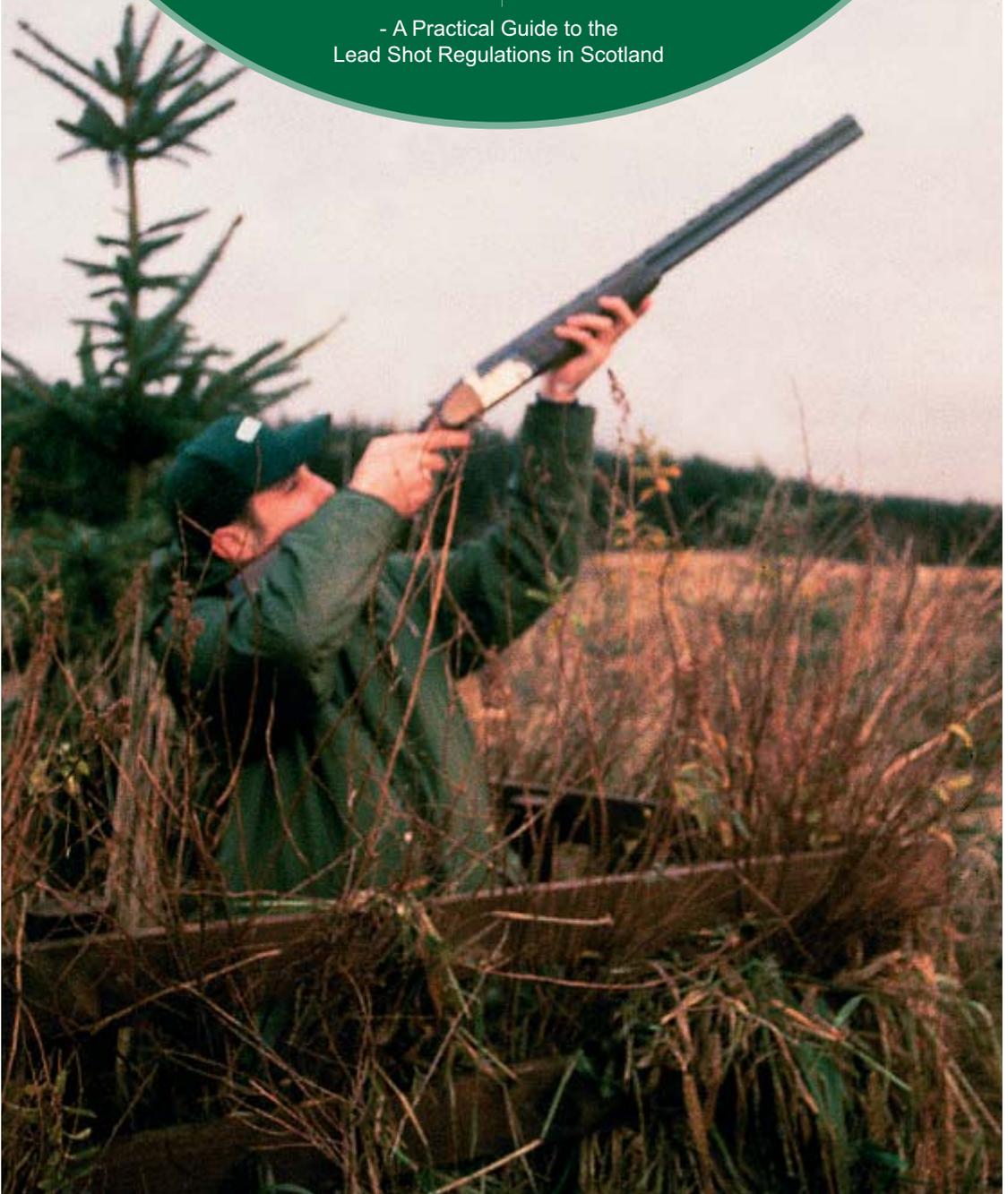


# "Protecting Waterfowl from Lead in Wetlands"



- A Practical Guide to the  
Lead Shot Regulations in Scotland







## 1. INTRODUCTION

1.1 It has been known for many years now that waterfowl die from lead poisoning after ingesting lead shot which has fallen into wetland habitats. Under the terms of the African-Eurasian Waterbird Agreement (AEWA), signatory Governments are obliged to endeavour to phase out the use of lead shot over wetlands. The *Environmental Protection (Restriction on Use of Lead Shot) (Scotland) (No.2) Regulations 2004 (SSI No. 2004/358)* represent Scotland’s response to this.

1.2 In practice, the new legislation formalises the shooting community’s voluntary ‘*Code of Good Shooting Practice*’, endorsed by key shooting and countryside organisations, which for several years have called on all those who shoot to avoid depositing lead shot in wetland areas used by feeding waterfowl.

1.3 The new Scottish legislation differs from that in place in England and Wales. It follows a habitat-based approach as opposed to a combined species/site restriction. For example, in England and Wales it is illegal to shoot any duck or goose with lead shot, or to use lead shot on a specific published list of SSSIs. In Scotland, shooters will continue to be able to use lead shot to shoot species such as duck, geese, game, pests or clays as long as this does not occur on or over *wetlands*<sup>1</sup>. Duck flying over, or geese coming into a dry stubble field, can still be shot with lead. The big difference is that the use of lead shot *over wetlands to shoot any species* is now prohibited. We believe that this is the simplest way for all parties to understand their responsibilities and eliminate the deaths of waterfowl from lead poisoning.

1.4 Wetlands are special because they attract waterfowl, which are important to many of us: shooters, birdwatchers, the tourist industry and the general public. Many species of waterfowl are migratory and we have an international obligation to ensure their conservation while they are with us, mainly over the winter months. While a sustainable harvest of waterfowl is perfectly acceptable, the loss of duck, geese or swans to lead shot poisoning is not. This is avoidable, and a restriction on the use of lead shot on wetlands is a sensible course of action.

1.5 For many years the susceptibility of waterfowl to lead shot poisoning has been researched and well documented. Lead shot is ingested either when birds are feeding or gritting and is ground down in the gizzard. The lead then enters the bird’s bloodstream, replacing calcium, and leads to damage to the nervous system, liver and kidneys. It also damages the gizzard and in such



<sup>1</sup> The definition of what constitutes a wetland for the purpose of the Scottish Regulations is set out at Part 2, “Description of the Legislation”.



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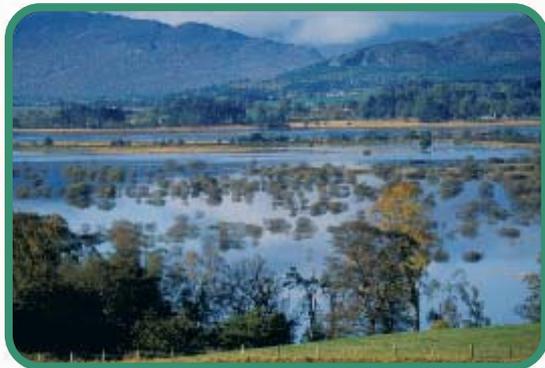
circumstances, the bird would be unable to feed. Not all birds die, but some do. There have been a few cases, although uncommon, where many ducks, geese and/or swans have died of lead shot poisoning in Scotland.

1.6 At the end of the day it is not about debating the numbers of birds dying from lead poisoning, but the fact that birds are dying unnecessarily and in a manner that is avoidable. From a responsible shooter’s point of view - from anyone’s point of view - this is not wise use of our waterfowl populations and it is not sustainable.

## 2. DESCRIPTION OF THE LEGISLATION

2.1 The Environmental Protection (Restriction on Use of Lead Shot) (Scotland) (No. 2) Regulations (SSI No 2004/358)<sup>2</sup> took effect on 31 March 2005 and prohibits the use of lead shot for shooting with a shot gun on or over wetland areas in Scotland. The purpose of the Regulations is to meet the international commitment under AEWA to protect waterbirds from the threat of lead poisoning and follows similar processes to those undertaken in England and Wales<sup>3</sup>.

2.2 The Scottish Regulations pursue a habitat-based approach as opposed to the sites and species approach in place in England and Wales. This difference of approach should be carefully noted in cross-border areas where the restrictions will apply (e.g. the Solway Firth and River Tweed). The Regulations in Scotland were finalised following an extensive consultation process both on the early policy and the final draft Regulations. This process included consideration of the approach in England and Wales and the effects of any restrictions on shooting bodies and their members. The Regulations fulfil Scotland’s obligations under AEWA, are proportionate and are not intended to unnecessarily restrict shooters.



<sup>2</sup> SSI 2004/358 both revokes and replaces the Environmental Protection (Restriction on Use of Lead Shot) (Scotland) Regulations SSI 2004/289.

<sup>3</sup> Regulations were introduced in England on 1 September 1999, prohibiting the use of lead shot (defined in the Regulations as any shot with more than 1% lead content) on or over specified Sites of Special Scientific Interest (SSSI) identified as important to waterfowl, on or over all areas below the high watermark and for shooting certain species of waterfowl anywhere in England. The Environmental Protection (Restriction on Use of Lead Shot) (England) Regulations (SI 1999 No 2170) have been amended by additional Regulations. In 2002 the Welsh Assembly Government introduced legislation (SI 2002/1730 (W.164)) for Wales similar to that adopted in England.

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2.3 For the purpose of the Regulations, “Wetlands” are defined by reference to Article 1(1) of the Ramsar Convention<sup>4</sup> with further explanation of the terms “peatland” and “temporary” wetlands. **It should be stressed that the Regulations do not implement the Ramsar Convention, but simply use the recognised Ramsar definition of what constitutes a wetland.** Article 1(1) of the Ramsar Convention states:

*“For the purposes of this Convention wetlands are areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six metres.”*

2.4 This Ramsar description of wetlands is developed into a more detailed classification of the wetland types included under the Convention, which can be found at: [http://www.ramsar.org/key\\_ris\\_types.htm](http://www.ramsar.org/key_ris_types.htm).

2.5 Regulation 3 states that for the purposes of the Regulations only, “temporary” in relation to wetlands mean wetlands which are covered with water on a seasonal, intermittent or regular basis, and “peatlands” means only peatlands with visible water. Types of wetland habitats likely to be covered by the Regulations are set out below.

### 3. TYPES OF WETLAND COVERED BY THE REGULATIONS

As outlined above, the Regulations are based on the definition of wetlands used by the Ramsar Convention, the International Convention on Wetlands, to which the UK is a signatory. The Regulations use this definition, emphasising that they apply to wetland habitats where standing or flowing water occurs.

We list below particular circumstances where we consider the Regulations apply.

#### 3.1 Marine and coastal wetlands

Marine waters less than six metres deep at low tide and all areas between the mean upper and lower spring tide marks. This includes beaches, saltmarshes, estuarine intertidal areas and lagoons. Coastal areas above the high water mark, such as sand dunes where there is standing water (in dune slacks for example) are also included.



<sup>4</sup> The Convention on Wetlands of International Importance especially as Waterfowl Habitat signed at Ramsar on 2<sup>nd</sup> February 1971.



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### 3.2 Inland wetlands

Flowing water such as rivers and streams, whether permanent, seasonal or intermittent are all included: you cannot use lead shot in or over these habitats.

Standing waters are also included; such as permanent or seasonal ponds, pools, lochs and lakes.



Fens, marshes and swamps are covered by the Regulations if water is permanent or if they are flooded seasonally: these habitats can be recognised by the presence of vegetation like reed beds, sedge meadows or rushes. If in doubt, don't use lead shot.

Peatlands, such as bogs and mires, **with visible standing water**, such as bog pools, lochans and dubh lochans are covered by the Regulations.



However, the Regulations do not cover all peatland; shrub or heath peatland or moorland, where standing open water only occurs on irregular occasions due to excessive hill run-off, is not covered by the Regulations and lead shot may continue to be used.



### **3.3 Artificial Wetlands**

Waterbodies such as canals, reservoirs, gravel pits, fishponds and flight-ponds are all covered by the Regulations. So are pools and ponds created as a result of farm works, irrigation, excavations, provision of water supply or wastewater treatment.



Farmland which is seasonally flooded on a regular basis is considered a wetland by the Regulations; so do not use lead shot over winter flooding areas, for example.

Puddles and brief temporary pools in corners of fields or on farm tracks, which are only present after heavy rain, are not covered by the Regulations.

When in doubt: we recommend that you do not use lead shot –it’s safer to assume a wetland is covered by the Regulations.

## **4. WHAT DOES IT MEAN TO YOU?**

4.1 This legislation applies to all shotgun shooters in Scotland and to all bores of shotgun, without exception . It does not apply to air weapons or rifles.

4.2 The key purpose of the legislation is to stop lead shot falling into wetlands. If your shooting involves shooting “on or over” wetland areas (ponds, lochs, rivers, streams, marshes, fens, bogs etc.) then you must ensure that you either use non-lead shot from 31st March 2005 or modify your shooting behaviour to ensure your shot does not fall into the wetland. Please bear in mind that a 12-bore shotgun shooting a normal cartridge has a maximum fall-out range of approximately 300metres.

4.3 Alternative non-lead cartridges currently available include steel (soft iron), bismuth, tungsten-based materials (including Hevi Shot), tin etc. The choice is yours, and this may be determined by cost or by desired performance. (See Section 5.)

4.4 By changing your shooting behaviour you may be able to avoid lead shot going “on or over” a wetland area.



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### 5. INLAND SHOOTING

5.1 Most inland shooting involves shooting over farmland, woodland or moorland. In many situations there will be no wetland features and consequently this legislation will not affect you, even if the intended quarry are waterfowl. (For example, shooting geese over a stubble field well away from wetland features would not require the use of non-lead shot.)



5.2 Inland flight ponds, no matter how small, are obviously wetland features. When shooting flight ponds you will now be required to use non-lead shot or, alternatively, shoot away from the pond. You must ensure that you do not shoot over wetland features like these with lead shot.



5.3 Shooting over farm fields will only be affected if those fields include wetland areas. These will include fields which are flooded on a regular basis: if a field is partly flooded (or if you know it is at other times of year), or have wetland habitats or features, then non-lead shot should be used. This is not, however, intended to apply to tiny areas of water such as puddles on farm tracks after rain.

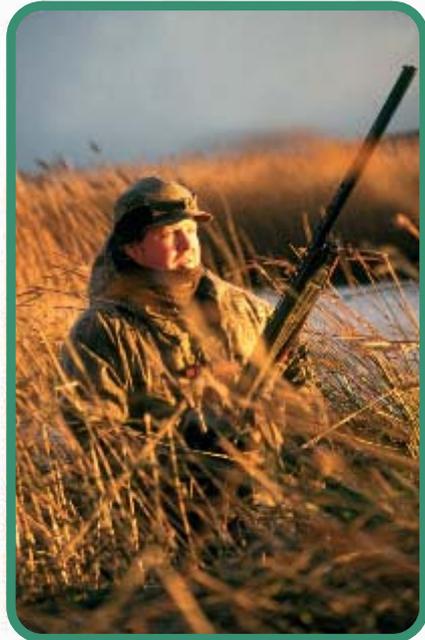
5.4 For game shooting or rough shooting you must ensure that you do not shoot on or over wetland features with lead shot. This won't affect shooting on peatland areas without standing water, so most grouse and open hill shooting will be unaffected. However, pheasants, for instance, are often found in and around areas of marsh adjacent to streams and lochs. Given the unpredictability of their flight it would be best to use non-lead cartridges in such areas to ensure that every sporting opportunity can



be enjoyed. It may also be necessary to alter the position or orientation of pheasant/partridge/grouse pegs/butts and even drives to ensure that those wishing to use lead shot can legally do so. When drives are arranged near to or over wetland features then non-lead cartridges should be used by all guns.

## **6. SHORE SHOOTING**

6.1 Wildfowling on the Scottish foreshore (the area between mean high and low water marks of ordinary spring tides) remains a popular activity. In many coastal areas this is a public right, whereas in other areas this right has been modified by the introduction of a permit system. In two of these permit-controlled schemes (Eden Estuary and Caerlaverock) there have been restrictions on the use of lead shot for a number of years. This new legislation now applies to all foreshore areas in Scotland therefore **all coastal wildfowling**, including puntgunning, will have to be undertaken with non-lead shot.



6.2 Wildfowling have traditionally used larger bore shotguns than most other shooters, such as 10 and 8 bores. The use of large bore guns is only affected in that shooters will have to use appropriate non-lead shot .

## **7. CLAY PIGEON SHOOTING**

7.1 Clay pigeon shooting will remain unaffected by this legislation **unless the shoot operates on or over wetland areas**. Established clay shoots and less formal, occasional shoots will all have to ensure that they are not shooting on or over wetland areas, or will have to use appropriate non-lead shot.

7.2 If there is a wetland feature on the site over which you shoot you may be able to re-arrange your traps and cages to ensure that shooting now takes place away from these features. We are aware of a small number of established sites where there is no alternative but to shoot over wetland features, such as foreshore. In such situations the shoot will only be able to continue if it ensures that non-lead loads are used.



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### 8. ENFORCEMENT

#### 8.1 How will this be enforced?

What will happen if I continue to shoot with lead after 31 March 2005?  
If you continue to shoot with lead shot on or over a wetland area you will be committing an offence, and this could be punishable by a fine not exceeding level 3 (this means a fine of up to **£1000**). *If you are a shoot owner, shoot captain, club official or a sporting agent and you knowingly allow the use of lead shot on or over wetland you may also be liable to a fine if convicted.*

#### 8.2 Who will police this?

Only the police have powers to enforce this legislation and inspect equipment such as guns, shot game/wildfowl or cartridges.

#### 8.3 Will my certificate be revoked?

This is a decision for the Chief Constable of the constabulary that issued your certificate. Certainly, infringement of legislation relating to pollution and conservation may make him or her question your continued suitability to hold a shotgun certificate. If you ignore the law in one area, what confidence does he or she have in your ability to respect the law regarding the safe use of shot guns or firearms?

### 9. ALTERNATIVES

#### 9.1 What are the alternatives to use?

The use of the shotgun developed along with lead shot, as this material was widely available, cheap and effective as ammunition. Despite this and the fact that lead is both heavy and soft, shooting with its alternatives, where correctly used, can continue to be both successful and enjoyable.



Steel is markedly less dense than lead, so, to achieve comparable ballistic properties it is best to use shot *at least* two sizes larger than lead. For example, if you normally shoot duck with number 6 shot it would be best to use number 4 steel shot or larger. Steel shot does not deform to the same extent as lead shot. Consequently it can hold a tighter pattern than lead. Care



must however be taken when using it in heavily choked barrels and in some older guns. Steel remains the cheapest non-lead shot available with prices comparable to lead shot.

Tungsten-based shot types (eg Tungsten Matrix) are similar to lead in density although more expensive than other alternatives. They are hard, though, and should be contained in plastic wads to protect barrel walls. With the most dense materials like HeviShot (tungsten-nickel-iron) you may be able to *reduce* shot size since their ballistic performance seems particularly good, though they are relatively expensive.

It is fundamentally important that you choose an appropriate load for the type of shooting you intend to do and then practise with it before using it in the field. Each type of cartridge has its own characteristics and it is essential to know how your chosen load performs in *your* gun by patterning it first and then, preferably, practising on clays. One lead alternative may suit one type of shooting whereas another performs better for another. It is vital for successful shooting to get the right balance between the number of pellets and their size *for each type of quarry* in order to ensure it is cleanly killed. BASC has information papers on how to pattern cartridges and interpret the results.

### **9.2 What is the maximum range of these cartridges?**

The maximum effective range of any gun/cartridge combination is the range at which *you* can be confident of consistently achieving a clean kill. Some people may be able to kill cleanly at 35 or 40 yds. whereas for others this may be considerably less –and it may vary from quarry to quarry. Make sure that you only shoot within your own effective range to ensure that wounding and wastage are kept to an absolute minimum. Wounding and wastage are caused by shooting at ranges outwith your own ability or the ability of your cartridge to deliver a killing pattern. Again, BASC can advise on cartridge/choke combinations both to maximise your enjoyment and success when shooting and to minimise unnecessary losses of your quarry.



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The British Association for Shooting and Conservation

