

# **Ruddy Duck *Oxyura jamaicensis* Management Plan**

## 1. Aim

The aim of this plan is to support the Life project eradicating ruddy ducks in the UK to protect the white-headed duck and thereby guide the eradication of ruddy ducks in Ireland.

## 2. Priorities

1. Initiate baseline surveys of ruddy duck in the Republic of Ireland in partnership with BirdWatch Ireland while also promoting awareness of this species and its impact with amateur and professional bird watchers.
2. Encourage the reporting of sightings through AlienWatch, BirdWatch Ireland, RSPB or other appropriate avenues.
3. Support the implementation of the Defra ruddy duck Eradication programme in Northern Ireland.
4. Engage with the Defra ruddy duck Eradication programme to facilitate transfer of knowledge and best practice between the UK and agencies in the Republic of Ireland prior to implementing the eradication programme.
5. Initiate ruddy duck Eradication programme in Ireland by 2009/10.

## 3. Identification

The male ruddy duck (*Oxyura jamaicensis*) is unmistakable, with its bright chestnut red breeding plumage, cobalt blue bill and narrow stiff cocked tail. The female is a duller brown colour. It is a relatively small duck (35-43cm long, with a wingspan of 53-62cm) and is rarely seen away from water.

## 4. Ecology

Ruddy ducks inhabit lowland wetlands with lush emergent vegetation and suitable patches of open water. They favour pools with fairly shallow bottoms and those which are rich in floating and submerged aquatic plants. The birds actively avoid flowing freshwaters and estuaries and saline lagoons. Ruddy ducks are omnivorous, primarily feeding on insect larvae and aquatic plant seeds by surface diving. They are gregarious for much of the year, forming flocks outside the breeding season. Ruddy ducks begin egg-laying in mid-April, with most broods appearing in June and July.

## 5. Impacts

The ruddy duck is unusual in that its main negative impact is not to biodiversity in Ireland but is overseas. It is the most serious threat to the survival of the globally threatened white-headed duck (*Oxyura leucocephala*) with which it hybridises. The white-headed duck is the only member of the *Oxyura* genus native to Europe. Its European range is now limited to Spain (resident population) and the eastern Mediterranean (wintering only). Spain is the only region in which it has expanded its breeding range and population size in recent years. Through determined conservation action (banning hunting and site management) numbers in Spain have risen from 22 in 1977 to 2,600 in 2003. Over 82% of breeding and wintering white-headed ducks in Spain occur on Natura 2000 sites.

In 1982 ruddy ducks were first recorded in Spain and hybridisation with the white-headed duck was first recorded in 1991. A minimum of 139 ruddy ducks have been recorded in 43 different locations in Spain since 1992. In captivity, ruddy duck x white-headed duck hybrids are fertile to at least the third generation, and a total of 59 hybrids were recorded in the wild on 23 sites in Spain between 1991 and June 2003. Hybridisation with the ruddy duck is now the most significant threat to the survival of the white-headed duck.

The two remaining European countries with ruddy ducks which have not undertaken control are Ireland and the Netherlands. Any European country which does not control their feral ruddy ducks is likely to be a source for continued hybridisation with white-headed ducks and liable for prosecution under non-compliance with the Habitats Directive.

Ruddy ducks are seen as such a serious threat that they are one of only four invasive species whose import into the EU is banned to protect native biodiversity. The work in the UK and elsewhere in Europe is supported by key conservation organisations e.g. RSPB and WWT.

### 5. Current distribution

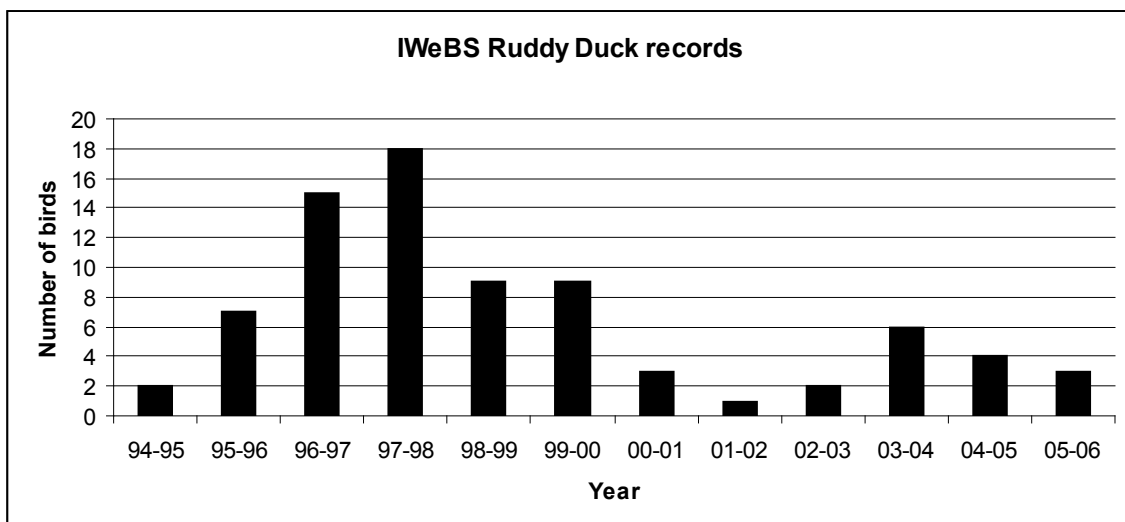
The ruddy duck is a native of North and Central America, and the northern part of South America. In its native range it is common, with a stable population of over 500,000 birds. However, since being introduced into wildfowl collections in the UK from North America in the 1950s, it has become established as an invasive non-native species in Britain. It is now widely distributed in Britain with the main concentrations in southern and central England. There are also small resident populations in France, the Netherlands, and Ireland but the distribution and size of these populations remain limited. The UK holds 95% of the feral ruddy ducks in Europe.

The first ruddy duck in Ireland was discovered at Oxford Island National Nature Reserve, County Armagh in March 1973, with breeding taking place the same year. In the 1980s the species had expanded to other sites and in 1986 the population was around 27-30 birds concentrating in winter, at Portmore Lough, County Antrim. By the early 1990s the population had grown significantly, reaching a maximum of 206 birds in January 1996. This peak has never been repeated since and was probably part of a weather related movement from Great Britain. However, some birds remained, boosting the small population.

The current breeding population in Northern Ireland is estimated at twenty five to thirty pairs with a wintering population of around seventy to seventy five birds. These figures were obtained through a year-long study of the species in Northern Ireland, undertaken by Environment and Heritage Service.

The expansion into the Republic of Ireland is less well documented but a small number of individual birds were recorded on the Irish Wetland Bird Survey. Breeding has been observed in Counties Dublin, Wexford, Limerick and Tipperary. This is unlikely to be a conclusive record of the species expansion in Ireland. Numbers may be underestimated due to the secretive nature of the species. It is however possible that the total Republic of Ireland population may be around 20-30 birds.

**Figure 1. Number of ruddy duck records in Ireland as recorded by the Irish Wetland Bird Survey (IWeBS)**



## 6. UK ruddy duck Eradication Programme

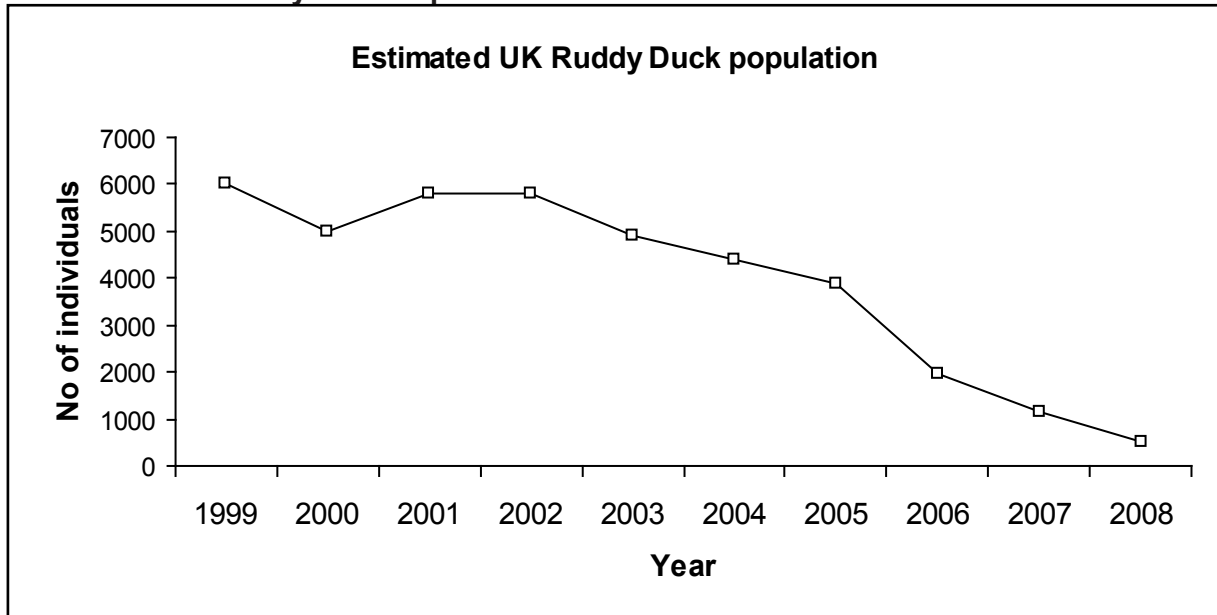
The Defra ruddy duck eradication programme aims to eradicate ruddy duck in the UK by 2010, with a reduction of >90% planned by February 2008. A secondary aim is to encourage pan-European co-operation through increased awareness of the species and the range of methods available to control the species. The UK programme consists of:

1. Shooting with sound-moderated rifles and shotguns as the main method of control supplemented by additional methods such as trapping and egg oiling, where appropriate.
2. Consultation with scientific advisers and animal welfare groups to ensure that disturbance to habitats and other species is minimised, that control and monitoring techniques are of the highest standard and that best practice is followed in terms of animal welfare.
3. Monitoring of changes in the size and distribution of the UK ruddy duck population and modelling of the time and effort required for full eradication of any remaining birds if this is not achieved within the time-span of the project.
4. Collation of data on numbers of ruddy ducks being recorded in Europe.
5. Raising public awareness of the need for ruddy duck control in order to prevent the extinction of the white-headed duck.
6. Maintenance of contact with national control teams in other European countries and dissemination of best practice through exchange visits and workshops.

### 6.1. Results/success

Ruddy ducks are known to move considerable distances throughout the year. This necessitates that control methods used must account for this seasonal shift in presence between sites. Using teams of trained full-time employees of Central Science Laboratory, ruddy ducks have been systematically removed from many UK water bodies (over 100 sites in Scotland, England and Wales).

**Figure 2. Estimated ruddy duck Population in the UK**



This is a unique eradication programme due to the large geographic extent involved (the whole of the UK) and the need for co-ordination with other European governments to ensure that small populations elsewhere are also eradicated. Control of ruddy ducks is concentrated on the main wintering flocks and the prime breeding sites. Control by shooting has proved to be the only effective method to bring about a rapid reduction in the population.

There is currently a general licence which allows the shooting of ruddy ducks in England issued under Section 16 of the Wildlife and Countryside Act 1981. This allows control of the species to be carried out by landowners all times of year subject to providing Defra with details of the numbers of birds culled.

The Defra plan is on schedule to eradicate ruddy ducks from the UK by the projected 2010 date. Further information on this programme is available from the ruddy duck project website ([http://www.nonnativespecies.org/Ruddy\\_Duck/](http://www.nonnativespecies.org/Ruddy_Duck/)).

## **7. Baseline survey**

Knowledge of the distribution of ruddy ducks in Ireland is crucial to the success of an eradication programme. It is recommended that a survey is conducted for this species across the island. This need not be a specific survey for the species as a number of organisations already conduct surveys of wetlands for bird species. These organisations should be engaged with to encourage staff and members to report sightings and non sightings of Ruddy Duck.

## **8. Eradication protocols**

### **8.1. Shooting**

This method has proved highly successful for the UK programme and is the recommended approach. When considering a management plan for ruddy duck in Ireland the following points are recommended:

- Personnel should work in pairs and the programme should be undertaken outside of the breeding season. Culling during the breeding season may help to prevent short-term population rises (see section 12 for breeding season timeline).
- All staff should be trained in bird species identification and also undertake a rigorous training programme in the safe use of firearms. It is important that this training is accredited to the standards necessary for health and safety of personnel and members of the public and also complies with relevant health and safety legislation.
- Due care and attention should be given to the consideration of other species and ensure the minimisation of their disturbance.
- Standard operation procedures should be drafted and agreed upon by the agencies involved and the personnel undertaking the programme of works.
- Recording of location, date, time, numbers of birds shot, sex, non target species shot and disposal methods is required.
- Wounded animals should be humanely despatched as a priority to minimise distress to the bird.

### **8.2. Missed birds or re-introduction**

No programme will be able to conclusively state that eradication has been achieved without adequate monitoring and surveillance for the target species. It is recommended that as part of the eradication programme amateur and professional recorders are encouraged to report sightings during and following the life of the programme. To achieve this, suitable information should be disseminated for inclusion in relevant newsletters and magazines pertaining to bird watching in Ireland and the UK.

## 9. Resourcing the plan

### 9.1. Control

The population of this species in Ireland is currently considered small but widely distributed. The costs associated with eradication will reflect this. An estimate of the resources needed for successful control of this species will be made after the collation of the 2008 IWeBS data. IWeBS bird counters will be asked to look out for this species in particular during the 2008 survey. This will establish the baseline distribution and population numbers for Ireland.

### 9.2. Education and awareness

The necessary education and awareness aspect of the control programme is estimated to be in the region of £5,000 - £10,000 (€6,000 - €12,000).

## 10. Recommended actions and timetables

Action	Responsibility	Timescale
Implement control programme for Northern Ireland	Defra and EHS	2008/09
Encourage specific monitoring and reporting by bird watchers	Northern Ireland Birdwatchers Association, RSPB, BirdWatch Ireland, Irish Wetland Bird Survey, EHS and NPWS	2007-2010
Conduct baseline survey of ruddy ducks in the Republic of Ireland	IWeBS	Autumn/winter 2008-09
Agree eradication methods in the Republic of Ireland and ensure procedures and protocols are adopted	Agency staff.	2009/10
Implement ruddy duck Eradication plan and support measures outlined in Defra plan	Agency staff	2009/10

## 11. Recommended calibre weapon

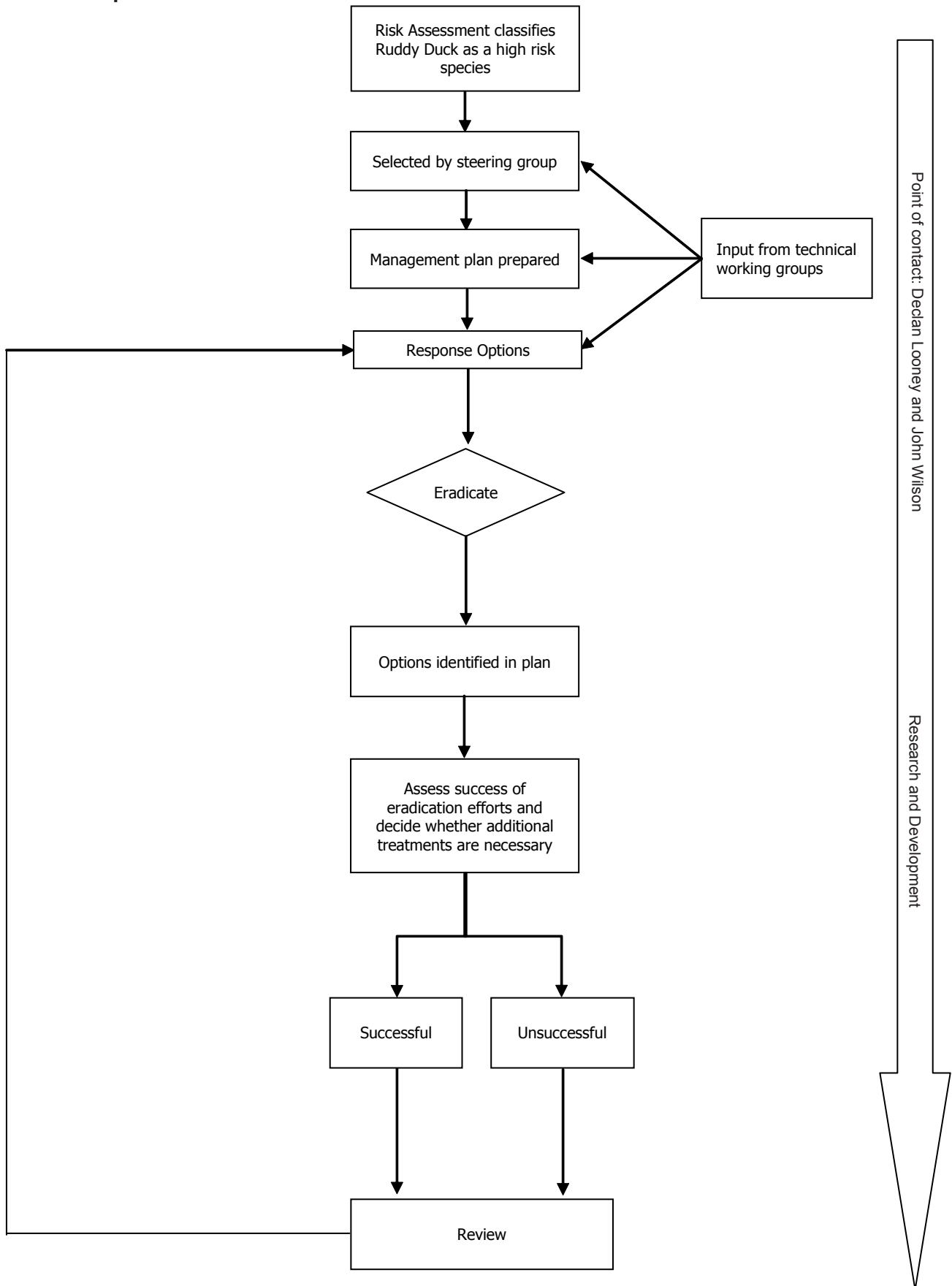
Species	Recommended calibre
Ruddy Duck	.22 centrefire

## 12. Breeding season of ruddy duck

Ruddy Duck	J	F	M	A	M	J	J	A	S	O	N	D

Breeding season

### 13. Control plan decision tree



The Invasive Species Ireland Project is undertaken, in partnership, by  
EnviroCentre and Quercus.



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