

The Rotherfield Demonstration Project



Our new demonstration project at Rotherfield aims to increase numbers of wild game together with other wildlife. © Francis Buner/GWCT

Our previous Grey Partridge Recovery Project at Royston targeted wild grey partridges at a site where they were still present in low numbers. Within five years we successfully increased the density of breeding pairs by five times. Our new Rotherfield Demonstration Project (2010-2014) aims to increase numbers of wild game in general, together with other wildlife. On the site, grey partridges have gone locally extinct and wild pheasant numbers currently allow only moderate shooting. The land is heavily wooded, and thus sub-optimal for grey partridges, but it is representative of large parts of the UK where wild game, once common, has dwindled away and where recovery will be challenging, but not impossible.

KEY FINDINGS

- We describe our new wild game demonstration project in east Hampshire.
- We aim to develop a sustainable and integrated game shoot, in conjunction with grey partridge re-establishment and the recovery of other declining farmland and woodland species.
- Habitat creation and enhancements totalled 174 hectares in 2010 (17% of the total farmland area), with a target area of 219 hectares.

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Background

Extending to around 3,600 acres (1,457 hectares), the Rotherfield demonstration area owned by the Scott family, is located in east Hampshire and is characterised by mixed farmland. The area has around 1,000 acres (405 hectares) of well managed ancient semi-natural woodland, 670 acres (271 hectares) of grassland and 1,600 acres (647 hectares) of arable on medium clay loam. The crops in 2010 were winter wheat (280 hectares), winter barley (94 hectares), winter oats (63 hectares), winter oilseed rape (74 hectares), maize (54 hectares), spring wheat (43 hectares) and spring rape (26 hectares). The grass is managed for cattle (389 dairy cows, 148 dairy replacement cows, five bulls and 52 beef cattle). Additionally, around 320 acres (129 hectares) are conservation areas (excluding over-wintered stubbles) managed under Environmental



All grey partridges released on the Rotherfield demonstration area are ringed for monitoring purposes. © Markus Jenny/GWCT

TABLE I

Existing and minimum target arable habitat enhancements at Rotherfield relevant to wild gamebird recovery (HLS option codes provided in brackets)

Habitat	Total 2010	2012-2014
	Existing (hectares)	Minimum target (hectares)
Beetle banks (HF7)	2.3	1.6
Enhanced wild bird seed mix margins (HF12)	9.9	24.1
Conservation headlands with no fertilisers (HF14)	5.0	0
Cultivated arable margins for rare arable weeds (HF20)	2.1	2.8
Pollen and nectar mix (HF4)	1.0	3.3
Total high quality nesting, brood-rearing and escape cover	20.3	31.8
Grass margins (HE1-3)	25.4	14.5
Floristically-enhanced grass strips (HE10)	0.6	8.6
Total grass margins	26.0	23.1
Restoration of species-rich semi-natural grassland (HK7)	2.1	2.1
Creation of species-rich semi-natural grassland (HK8)	0.5	8.0
Restoration of grassland for target features (HK16)	0.0	6.9
Creation of grassland for target species (HK17)	0.0	6.1
Maintenance of species rich grassland (HK15)	0.0	2.1
Total species rich grassland	2.6	25.2
Over-wintered stubbles (HF6)	65.0	70.0
Extended over-wintered stubbles (left until August, HF22)	28.0	30.0
Total stubbles	93.0	100.0
Uncropped cultivated areas (lapwing plots, HF13)	2.0	2.0
Field corner management (HF1)	24.3	32.8
Arable reversion (HD7)	6.1	4.6
Total	174.3	219.5

Stewardship, the old Countryside Stewardship Scheme and the Campaign for the Farmed Environment. Table I gives an overview of the most important habitat enhancements in 2010, including stubbles beneficial for game and other wildlife in winter and spring.

The estate's game books date back to the 1840s and give a fascinating insight into the history of game shooting in that part of the world (see Table 2 overleaf). In summary, these show how numerous grey partridges were up to the 1900s and how they steadily declined until their extinction in the 1990s. Once extinct, the estate briefly switched to the release of red-legged partridges. At the same time, pheasants were released to increase the shooting bag. However, in 2004 the estate decided to stop releasing altogether and to convert to a wild bird shoot, based on four to six days per season. This abrupt change resulted in much reduced bags owing to low stock, low breeding success, difficulty in driving and, indeed, shooting the few wild birds. Since 2004, grey partridges have been restocked, which has resulted in only moderate breeding success until now (see Table 3 on page 25).

Habitat improvements

To increase the amount and quality of the habitat we submitted a Higher Level Stewardship (HLS) application with an agreement expected in April 2012. Until then we will increase the quality of habitat according to the possibilities within the current Entry Level Stewardship scheme agreement. Table I shows the most beneficial habitat improvements for gamebird recovery that are already in place, in comparison with the targets planned for the next five years. Particular emphasis has been put on high-quality nesting, brood-rearing and escape cover; which we aim to increase from 20.3 hectares to 31.8 hectares (78.6 acres), and species-rich grassland from 2.6 hectares



We aim to increase high-quality nesting, brood-rearing and escape cover. © Francis Buner/GWCT

to 25.2 hectares (62.3 acres). The woodland, which is already well managed, will have additional woodland edge features and wider rides. Furthermore, from 2011 the farm will reduce block cropping.

Game recovery strategy

The project area is split into two halves with the Trust side managed by our gamekeeper, Malcolm Brockless, and the Rotherfield side managed by the estate's gamekeeper, Peter Rose. On the Trust side, all of our game management recommendations are being implemented, whereas on the Rotherfield side, the management decisions are being made by the estate.

Keepers who rear gamebirds for shooting often find the timing of focused predator control from March to July difficult. Apart from good habitat, predator control is essential to recover and sustain wild game such as pheasants at shootable numbers. Also when trying to re-establish a stock of grey partridges, red-legged partridges should not be released as some greys may be accidentally shot on red-legged drives. In the short-term this will typically result in low bag numbers. At Rotherfield we aim to demonstrate a possible way out of what seems a difficult situation for most.

At Rotherfield we aim to recover wild pheasants by habitat and predator management only, whereas grey partridge recovery will be based on our *Guidelines for re-establishing grey partridges through releasing*. We anticipate it will take three to five years for game to start thriving, during which time we will be having as many shoot days as the stock will stand and bag numbers as high as we can make them. To help maintain shooting interest during the critical transition period we aim to release a

TABLE 2

Overview of historic game bags at Rotherfield

Decade	Years	Pheasants shot (average/year)	Pheasants reared (average/year)	Grey partridges shot (average/year)	Red-legged partridges shot (average/year)	Red-legged partridges reared (average/year)
1840s	8	140	0	286	0	0
1870s	10	812	no data available	456	0	0
1900s	7	1,609	1,971	167	0	0
1930s	8	1,849	2,987	65	0	0
1950s	10	259	no data available	11	0	0
1980s	10	959	no data available	2	0	0
1990s	6	1,361	4,558	0	279	1,367
2000s	6	60	0	0	0	0

TABLE 3

Grey partridge recovery (all birds were released in either late summer or autumn of the year given)

Year	Birds released	Spring pairs	Autumn adults	Wild broods	Wild young
2003	0	0	0	0	0
2004	77	0	0	0	0
2005	75	8	12	0	0
2006	69	8	7	0	0
2007	75	10	11	0	0
2008	124	4	9	3	4
2009	227	15	16	3	20
2010	113	24	24	2	19

moderate number of around 600 reared cock pheasant poults during late July/early August on the Trust side. This will be done annually until good bag numbers can be achieved with wild game only. We hope that this strategy will appeal to a wide number of practitioners and make partridge recovery from no stock a real possibility.

Monitoring

In 2010 we began a monitoring programme for gamebirds, woodcock, lapwings and songbirds. In spring we found 184 cock and 264 hen pheasants on the whole project area. The autumn counts are difficult owing to the large amount of woodland, but we believe that the 40 wild broods counted, comprising 144 chicks, do not reflect the true breeding success. We hope to find a better method to record breeding success in future years.

There were 24 grey partridge pairs in the spring, all of which were derived from released stock. Breeding success was low with only two broods seen. We recorded 35 pairs of red-legged partridges and 14 broods in autumn.

For woodcock, we surveyed four different woods in May and June, of which two had 20 to 30 sightings of roding males. This equates to five or six individual males per wood, although the extent of overlap between the woods is unknown. No roding was recorded in the other two woods.

We recorded 10 pairs of lapwings, of which nine clutches hatched and five produced one to three fledglings. Along transects measuring 30 kilometres in length in total, we recorded 58 bird species during the breeding season, of which 10 were UK red-listed species: cuckoo, skylark, tree pipit, song thrush, spotted flycatcher, marsh tit, starling, house sparrow, linnets and yellowhammer.



*Wild pheasant recovery will be achieved by habitat and predator management only.
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(L-R) Francis Buner is leading the monitoring and Malcolm Brockless, our gamekeeper, is managing the Trust side at Rotherfield. © Markus Jenny