

Gray J (John)

From: Alasdair.Reid@scottish.parliament.uk
Sent: 17 March 2008 11:36
To: Dignon HJ (Hugh)
Cc: Hastings RD (Richard)
Subject: FW: sparrowhawks
Attachments: Sparrowhawks and pigeons March 08.pdf; Sparrowhawks and pigeons Annex.pdf

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Hugh (cc Richard)

Further to my conversation with Richard this morning, would it be possible to give me an update on timings and rationale behind the licence for the trial project outlined below?

Best regards

Alasdair

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-----Original Message-----

From: Harrison, Julia [<mailto:julia.harrison@rspb.org.uk>]
Sent: Friday, March 14, 2008 12:21 PM
Subject: sparrowhawks

Sparrowhawks and racing pigeons

The Scottish Government has recently been considering whether to issue a licence to the Scottish Homing Union for a trial project to capture sparrowhawks at racing pigeon lofts in central Scotland and release them in Dumfries & Galloway, to test whether this measure protects racing pigeons from predation. You may have seen some PQs on the issue this week.

The original proposal was for the trial to begin imminently, but the Minister has just announced that it will be delayed. However, RSPB Scotland remains very concerned.

I have attached a briefing on this issue which explains our opposition. Our scientific assessment of the project, and its monitoring, shows that it is severely flawed in several respects, not least because it does not explore the fate of the sparrowhawks that will be removed. This assessment is included in the attached Annex.

We consider that this is a disproportionate response to this issue and it will not resolve the concerns of

20/05/2008

pigeon fanciers. RSPB Scotland remains vigorously opposed to the removal or killing of birds of prey.

If you would like to discuss this further, please do not hesitate to get in touch.

Kind Regards,

Julia Harrison
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RSPB Scotland
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Sparrowhawks and Racing Pigeons

RSPB Scotland response to the licensed translocation of sparrowhawks

Summary

The Scottish Government is in the process of considering whether to issue a licence to the Scottish Homing Union (SHU) for a trial project to translocate sparrowhawks (*Accipiter nisus*) at fifteen racing pigeon lofts in central Scotland, ostensibly to test whether this measure protects racing pigeons from predation. At this stage, the trial will be non-lethal, but it can be expected that calls for lethal control of sparrowhawks will follow. The legal advice we have received concludes that the trial itself may not be lawful and that, regardless of this, any resulting licensed removal or killing of sparrowhawks would not be legal. Our scientific assessment of the proposed methodology for this trial, and associated monitoring, shows that it is severely flawed in several respects, not least because it does not explore the fate of the sparrowhawks that will be removed.

Any change in the law to protect racing pigeons at the expense of protected birds of prey, such as sparrowhawks and peregrines, is resisted by RSPB Scotland (and large sections of the Scottish public, based on public comments in the press and elsewhere). Birds of prey are an important and natural part of Scotland's wildlife spectacle, which attracts many thousands of tourists each year and valuable income to many communities.

We firmly believe that a change in the law to permit the lethal control of sparrowhawks and other raptors, that sometimes take racing pigeons as prey, is not supported by the published scientific research. The latest Scottish research shows that sparrowhawks take less than 1% of released racing pigeons (*Columba livia*) annually and, although this predation may be very distressing when witnessed, it is a negligible threat to the interests of pigeon fanciers. The research shows that most racing pigeons that go missing are not killed by sparrowhawks and other birds of prey but stray off course or are lost to bad weather. In these circumstances, we believe proposals for translocation or lethal control cannot comply with the Scottish domestic legislation which the Scottish Parliament reinforced when passing the Nature Conservation (Scotland) Act 2004, or with the underpinning EU legislation.

This trial would proceed against the legal and conservation advice from Scottish Natural Heritage, the Scottish Government's advisors on nature conservation. We consider that this is a disproportionate response to this issue and it will not resolve the concerns of pigeon fanciers.

Background

Some pigeon fanciers and their organisations have called for birds of prey, particularly peregrines and sparrowhawks, to be removed or killed to protect their interests. These calls continue despite the results of scientific studies, which clearly and consistently conclude that removal or lethal control is not justified.

RSPB Scotland remains vigorously opposed to the killing or removal of birds of prey. This position is based on the basic ecology of these species. They are highly sensitive to slight increases in mortality over and above their naturally low death rates. This is illustrated by the

former complete extermination of several species within Scotland and the removal of others from wide areas of the country where they would otherwise naturally occur. Although there has been substantial recovery by some species - including sparrowhawks - from this historical situation, they remain permanently vulnerable to local extinction. The most recent surveys of the UK sparrowhawk population show a slight overall decline (BTO Breeding Bird Survey, 1994-2006).

The deliberate illegal killing of many bird of prey species is still a widely recognised threat to their long-term conservation status. Last year, 2007, was one of the worst on record for this problem. To legalise the killing or removal of birds of prey by adding to this existing illegal threat would be highly irresponsible. Healthy raptor populations are in any case an indication of the health of the environment.

RSPB Scotland sympathises with those whose pigeons may have been affected by sparrowhawks, but feels that this interest should be safeguarded by ameliorative measures and should not come before the UK's international responsibility to protect our raptor populations. Pigeon owners must accept there are some natural risks in the environment into which they choose to deliberately release their birds.

The RSPB encourages racing pigeon organisations to fund research into the effectiveness of methods to deter birds of prey that do not involve killing or other forms of removal, as well as to learn more about the causes of large numbers of pigeons straying - the underlying factor in most pigeon losses. We have offered to advise on this research.

Conclusions

- Sparrowhawk impacts on racing pigeons are extremely low when compared to other factors such as straying, bad weather, domestic cats and collisions (see overleaf).
- There is no scientific justification for suggesting that the killing or removal of sparrowhawks is an appropriate, proportionate response to this issue.

For further information please contact:

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The findings of the DETR/JNCC UK Raptor Working Group 2000

Pigeon fanciers, through the Royal Pigeon Racing Association (RPRA) and Confederation of Homing Unions (CHU), were represented on the UK Raptor Working Group, along with shooting, land-owning and conservation interests, and government experts from across the UK. The Group's Report represented a consensus view, was based on a review of the best available science and was agreed by all the participants.

The Report concluded that there is no legal basis for the control of birds of prey to protect racing pigeons, but that there should be more research into protective measures, and into the causes of pigeons straying, this being identified as the major cause of pigeon losses. Research by the Hawk and Owl Trust, commissioned by DETR for the Raptor Working Group, found that predation by birds of prey is relatively minor compared to the effects of pigeons straying. The RSPB continues to support these findings and would welcome further properly conducted research in this area.

The findings of the Central Science Laboratory Report 2004

The results of the investigation by the Central Science Laboratory (CSL) into the impacts of birds of prey on racing pigeons were published on 23 April 2004. The research was carried out independently under the auspices of Scottish Natural Heritage (SNH) and the Scottish Homing Union (SHU). RSPB Scotland was not involved in the research process. The CSL research identifies the following key findings:

- The Scottish racing pigeon population is estimated at 340,382 birds and there are about 4100 lofts.
- 56% of pigeons in the loft population at the start of the racing season are lost annually to all causes.
- Over half of all pigeon lofts reported no losses of pigeons to sparrowhawks. Less than 1% of all substantiated, probable and possible pigeon losses are attributed annually to sparrowhawks. There is regional variation and variation at the individual loft level. The lofts that had a greater proportion of woodland cover surrounding the loft were more likely to suffer some sparrow-hawk predation (sparrowhawks use cover and surprise prey when they hunt).
- 58% of loft owning respondents said that multiple use of different types of deterrents were of some use in preventing predation (although only 21% reported actually using such deterrents).
- The Report suggests that the use of raptor deterrents as a solution should not be rejected. A number of deterrents and modes of deployment used in other avian conflict settings appear suitable for testing at racing pigeon lofts (e.g. mirrors and reflectors). While pigeon-based deterrents and those on race routes may not be as effective as hoped, field trials of deterrents around lofts show some hope of finding effective solutions. This confirms the results of previous research and indicates that the issue of sparrowhawks (which is a loft-centred issue) could be addressed by deterrents.
- The Report recommends further research into the causes of straying and maximising the effectiveness of loft based deterrents.

Scientific Critique of SHU/SNH research trial

Dr Arjun Amar & Dr Jeremy Wilson, Conservation Science Department, RSPB Scotland.

In our opinion the SHU/SNH research proposal is flawed on several scientific counts, which we detail below.

1. Weak statistical power

In its present form, the proposed project *does not have the power to detect any effect of the treatments*. This is simply because the variables that would be measured (sparrowhawk attacks or kills) are very rare events. We can demonstrate this using data gathered by CSL (Henderson et al. 2004) at Scottish lofts where sparrowhawks killed pigeons, to predict the rate at which attacks or kills are likely to happen. The daily kill rate in lofts without sparrowhawk removal (the 'control' group) is predicted to be around 1 pigeon every 189 days, and therefore over the 6 weeks of the trial, equates to around 0.22 pigeons per loft. Thus, across all 15 lofts in the control group we would expect approximately 3 pigeons to be killed. In this context, if the experimental treatment is highly effective and reduces pigeon predation rate by 50%, then we expect 1.5 pigeons to be killed across the 15 lofts where a sparrowhawk is removed (the treatment group). Given the variability inherent in these data, the ability to detect this difference would be very low indeed. Simulations using the CSL data suggest that the proposed project would have a power of only approximately 15% to detect an effect of sparrowhawk removal if it reduced pigeon predation rates by half. This power would be even lower if the

actual effectiveness of sparrowhawk removal was less. To provide context, most experimental research proposals would aim for a power of at least 80% to detect a specified size of effect.

These same issues apply equally if attack rates, instead of kill rates are used as the metric for data analysis. Based on the known success rate of sparrowhawk attempts to capture prey (16% - Cresswell 1994) we estimate the attack rate at lofts in the control group to be around 1 per month, and so the average number of attacks per loft over the course of the project will be only 1.4. Even if one observer spent all the daylight hours of the 6-week trial watching lofts, they might witness only 1 or 2 attacks. Thus, all the issues surrounding lack of power to detect a difference apply to using either attack rate or kill rate as the criterion for assessment.

There are two exercise systems used at lofts. At those lofts not adopting the natural system, there might be a greater chance of witnessing an attack. However, the actual attack rates presented here still apply, and therefore the inability to detect an effect remains. The only way to improve the power of the proposed study to detect an effect of sparrowhawk removal would be to run the experiment over a much longer period. Increasing the number of lofts is unlikely to help; our simulations suggest that even increasing the numbers of lofts 20-fold will not deliver a high probability of detecting any effect of sparrowhawk removal on pigeon predation.

2. Objectivity of data collection

The use of loft owners to record the number of attacks raises concern from a scientific objectivity perspective. These records could be criticised for not being collected independently. The suggestion that observations by researchers could validate these data is not realistic. The likelihood of an attack happening when the loft owner and observer are both present is very low indeed, given that we might expect only one or two attacks at each loft over the whole course of the trial.

3. Seasonal timing

The original start date of March 1st overlaps with the sparrowhawk's breeding season, which begins in early March – according to Professor Ian Newton who is the UK's (arguably the world's) leading expert on sparrowhawks. This raises serious ethical questions regarding the proposed removal of adult sparrowhawks that may have begun nesting attempts.

4. Lack of monitoring provision for translocated sparrowhawks

There is no monitoring of the translocated sparrowhawks proposed. For welfare reasons, this must take place through radio-tracking to check possible effects on the survival of these birds. It is also important to test whether translocated birds return to the area where they have been trapped. Colour ringing would not be sufficient to monitor either of these measures. Work by Marcstrom & Kenward (1981) on translocated goshawks suggested that survival of this species was reasonable and that the majority of birds did not return. However, these translocations were in autumn and winter, and over 80% of these trapped individuals were dispersing juveniles. This proposed experiment for sparrowhawks plans to trap in spring, and it is very likely that a far higher proportion of these trapped individuals will be resident adults. These birds could well show a very different response, and be more likely to return quickly to the area where they have been trapped. Moreover, because spring is a time of high territoriality in the sparrowhawk population, any translocated bird may find it very difficult to establish themselves in the local population.

5. Proposed recipient sites

The proposal suggests that trapped sparrowhawks are moved to large forestry blocks out-with the existing range of the species. However, a simple glance at the species distribution shows that is not possible as there are no such places. The species is present in forestry and other suitable territory throughout the UK, even as far north as Orkney.

References

- Cresswell, W. 1994. Age-Dependent Choice of Redshank (*Tringa totanus*) Feeding Location: Profitability or Risk? *Journal of Animal Ecology*. 63. 589-600.
- Henderson, I., Parrott, D. & Moore, N. 2004. *Racing pigeons – Impact of raptor predation*. Report to Scottish Natural Heritage & Scottish Homing Union. Central Science Laboratory.
- Marcstrom, V. & Kenward, R. E. 1981. Movements of wintering goshawks in Sweden. *Swedish Game Research*. 12: 1-35.

Gray J (John)

From: Bainbridge I (Ian)
Sent: 18 December 2007 12:24
To: Dignon HJ (Hugh)
Cc: Hooper I (Ian)
Subject: Sparrowhawks

Attachments: Sparrowhawk capture and translocation issues.obr

Hugh

You asked for further information about the issues around sparrowhawk translocation work. Sorry this has taken a little time but I have been trying to find parallel examples from elsewhere in the world, and have not yet managed to speak to Ian Newton or Mick Marquiss about this.

I hope that attached provides some further context for you though, and hope to speak to Ian or Mick very shortly.

My opinion is that this is not a productive route to follow (but I note what you say about the Minister's view).

I will not comment on **legal issues**, they are for you and others to determine.

In my view there are some specific **welfare issues** and implications, which I hope I have specified in the attached brief.

The main **ecological issue** is that all the experience available from studies on birds of prey (and other birds and other predators) shows how remarkably capable established / territorial birds and animals are at returning to their home range or territory. The only case I can find with Accipiter hawks is from Australia, where precisely such a comment is made. With other raptors, there are many cases of homing too, even in birds which are not migratory, such as the Hawaiian hawk. So I think in many cases, relocation may not work.

Happy to discuss, and to discuss my view with the Minister if required

Ian



Sparrowhawk
capture and transl...

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Sparrowhawk capture and translocation issues

1. Translocation is entirely inappropriate during the breeding season – more than most bird species there are animal welfare issues related to the survival of the young. The female actually feeds the young but the male provides most of food until the young are large. Until ca 70 days the parents continue to feed the young. If the female is removed the young are very likely to die as the male is unable to feed alone.
2. The breeding season cycle is: pair formation early in the year, up to 3 months before egg laying. They nest mostly May-June, young are present mid June – mid August, fledge at 25-30 days, and are dependent until perhaps mid Sept (60 days old – ca 30 days after fledging).
3. Sparrowhawks are strongly territorial during the breeding season; nests are spaced near regularly throughout suitable habitat at ca 1 pair per 1-1.5 km intervals.
4. Pairs do not mate for life, many change annually, and pairing breaks down in the autumn when birds become largely solitary for the winter period.
5. This is a short-lived species: mortality of young/ first year birds ca 70%, of older birds 40-60%. So, most birds live less than 1 year, most adults live less than 1-2 years of adulthood. This suggests that lofts with long term problems may have problems related to location and management, rather than to 'an individual sparrowhawk'.
6. In winter sparrowhawks do not hold territories; British birds are supplemented by migrants from Scandinavia.
7. In winter sparrowhawks have far larger home ranges (200 – 1000 ha), many of which overlap, so several sparrowhawks are likely to visit the same place in the course of a day searching for food. Individuals will feed over 1-2 – 5 km range in winter.
8. After a post-juvenile dispersal, most British breeding sparrowhawks settle in a general area for the rest of their lives.
9. I am not aware of any studies of 'homing' in European sparrowhawks, but a number of US studies have shown that territorial raptors 'home' rapidly, regardless of whether they are migrant or resident (eg Hawaiian hawks). In Australia, territorial brown goshawks (a very similar species which sometimes preys on domestic fowl and pigeons) "will return from considerable distances when relocated." If this occurs, translocation will be an ineffective tool as many birds will rapidly return to their home range or territory. This should be assessed as part of any translocation exercise.

Handling and transport of sparrowhawks.

1. Sparrowhawks very fast and active; if they are held in a metal mesh trap, such as a Larsen trap, for any period they are likely to suffer cuts and abrasion to wings and face, and feather damage such as broken tail feathers or primaries.

2. Sparrowhawks are pigeon-sized (males around 150 g, females 250 g). They are an aggressive, fast-reacting species in the hand, likely to grab captors with very strong talons, less likely to bite, but may do so. Inexperienced handlers may find them difficult to handle safely, for them or the birds.
3. If transported in hard or wire mesh boxes / cages, they are highly likely to abrade themselves and cause feather damage to wing and tail feathers; I would recommend a small cardboard box with cloth in the floor. Even with this, feather damage is quite possible.
4. Transporting must be carried out as quickly and calmly as possible. The longer the bird is kept, the more risk to its welfare. A purely personal opinion would be that keeping a bird in a box for over an hour would be inappropriate, but I have no data to support this
5. Release: presumably we should ensure that birds are not released in another pigeon fancier's area? A winter 1000 ha home range suggests birds should not be released within ca 2km of another loft; past studies suggest home ranges may be as much as 5km in winter.
6. If translocation is to be done, in my view it should only be seen as a specific short-term attempt at a remedy in exceptional cases, and not as a generally licenced tool. It should be initially be treated as an experiment. If this is the case, it:

Should be carried out under a specific licence

Only during October – December

Only where all other means of deterrent have been and continue to be used

Where recent kills of pigeons have occurred and can be demonstrated

Limited to one sparrowhawk per licence, and reassessed after a removal

Trap to be checked at least at 30 minute intervals

Done by experienced bird of prey handlers

Transported immediately upon capture; released immediately

Radio tagged by licenced bird of prey handlers

Radio-tracked for a period of say 14 days; to observe whether they return to their capture location, stay in release area or move still further elsewhere.

Context

1. The only other place in the world I can find which has similar arrangements for this is Victoria, Australia, where brown goshawks may be trapped and relocated by Department of Sustainability and Environment staff as a short-term remedy, in exceptional circumstances. I have not had time to do a full review, however.
2. The DSE issues other guidance on managing the problem, much familiar to us, on protecting loft areas, exercising birds at different times.
3. Their work suggests that juveniles generally will not return to the trap location, but that adults with established territories will return from considerable distances when relocated, so at best, translocation should be seen as a short-term 'fix'. I

would suggest that 'persistent sparrowhawk problems' are more likely to be from adults which have formed breeding territories.

4. A quote from Ian Temby, Wildlife Damage Control Officer in Victoria "With many species of birds and some mammals, relocation makes little sense. Most bird species are highly mobile, and new individuals will continue to be drawn to an attractive food source, and as I have already illustrated, relocation of a possum from a house roof will simply make way for another possum to move in."

Dr Ian Bainbridge
Chief Ecological Adviser
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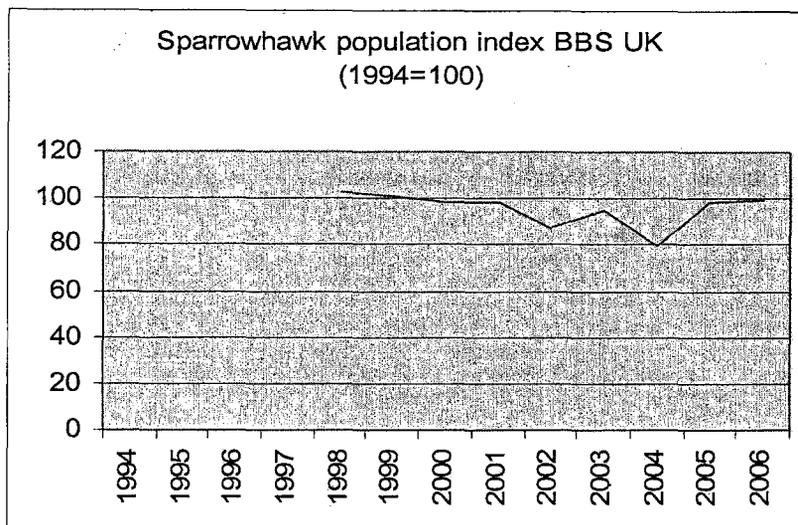
Sparrowhawk numbers in Scotland and UK

Sparrowhawks are censused annually by the BTO Breeding Bird Survey, at a UK level.

They are recorded in 14-15% of the 3295 1km squares censused across the country

From 1994-2006, the UK population index has decreased by 1% - no significant change

The trajectory of the population is shown in the graph below; suggestion of decline to 2004 and recovery since.



In Scotland, sparrowhawks are recorded in less than 20 of around 300 1km squares surveyed (333 in 2006). No index is therefore produced. This appears to be half the percentage of squares in UK overall.

The first Breeding Bird Atlas was completed in 1968-72; the second in 1988-91. The next is underway now (2007-2011) and will provide valuable new data.

At the UK level, sparrowhawks increased by 19.6% between the two atlases. They were recorded in 2178 10 km squares in GB. This increase was attributed to recovery following organochlorine pesticide declines, especially in eastern England.

In Scotland sparrowhawks were present in 627 10km squares in 1988-91 (57% of squares), an increase from 594 in 1968-72 (5.5% increase). (Scotland has approx. 1100 10km squares).

The UK Raptor Working Group report (2000) suggested sparrowhawks had (re)occupied all suitable areas of UK since recovering from organochlorine pesticide declines. It reported declines in numbers in the late 1990s in some intensively studied areas of southern Scotland.

There is no direct count or estimate of total population size. Newton has made several indirect estimates. The UKRWG Report suggested a UK population of 34500 pairs, of which 7,000 pairs are in Scotland, based on Newton's assessment of the second Atlas. These could be supplemented by a further 14000 juveniles / non-breeders.

Gray J (John)

From: Des Thompson [Des.Thompson@snh.gov.uk]
Sent: 03 June 2008 19:13
To: Alex Mackay
Subject: Fwd: Raptors and racing pigeons: some thoughts

>>> Des Thompson 28/01/2008 10:20:40 >>>

Hugh

Racing pigeons and sparrowhawks: meeting with Minister for Environment on 29 January 2008

1. Diversionary feeding of sparrowhawks to try and reduce their impacts at lofts

Such a trial has some merit, though it would be expensive. If successful, there are major implications in terms of how sparrowhawks could be managed around lofts.

Such feeding would be done close to the nests of sparrowhawks which are in the hunting proximity of a pigeon loft. Such work has been done in other raptor species, notably feeding hen harriers to successfully divert them from red grouse chicks. For sparrowhawks, we know from research that diversionary feeding of females before and during the egg laying periods (in May) resulted in earlier and larger clutches, and during the nestling period resulted in heavier females.

If a trial was undertaken, there would ideally need to be replicates in terms of numbers of lofts studied and sparrowhawk nests fed. A basic trial, and it would just be a trial, could compare two lofts, one with feeding of surrounding sparrowhawks and one without. Such work would need to commence in mid March (when courtship begins, in order to help with locating sparrowhawk nests), with feeding taking place from late April (when egg laying begins) through to early August (when young are in the nest).

A research team would be needed to locate sparrowhawk nests, feed the sparrowhawks, observe numbers of pigeons at lofts (and any kills), and observe prey taken to sparrowhawk nests. If this work was done at an experimental and control loft, there might be a need for three personnel working on the project for 6 months. The costing of such work would be in the region of £110,000.

2. A 'scaring' trial, to try and divert sparrowhawks from pigeons

Several techniques remain to be tested (notably bioacoustics and models of predators). There is no support for this approach from the SHU, and it would be difficult to sell this to the membership. It is important to note that despite these concerns, it is felt by some scientist that such techniques could work well, and should certainly be trialed.

A trial, again focussed initially on two sets of lofts, would cost in the region of £60,000.

3. A translocation trial, to remove sparrowhawks from a pigeon loft area

Our knowledge of the number and distribution of breeding pairs, and non-breeding birds, is poor. Population estimates of the Scottish population of sparrowhawks suggest around 7,000 nesting

pairs, and a further 4,000 non-breeding birds. These are by no means robust estimates. We do know, however, that there is a rapid turnover of birds in the population; if a nesting member of a pair disappears, it may be replaced very rapidly (in a matter of days).

In terms of a translocation trial, we do not know what impact any removal of birds would have on the density of sparrowhawks in that area; it could conceivably increase it (non-breeding birds replace territorial birds where food is plentiful, such as around lofts). We do not know what would happen to released birds, and but we do know there are welfare concerns about the problems of handling the birds (they are very prone to feather damage).

Legally, our advice is that there is no basis for translocation because the purpose is to protect 'private property', and other legal, non-lethal methods have not already been tried.

Cost wise, such a trial would be extremely expensive, involving trapping (possibly repeat trapping if areas infill with sparrowhawks), housing sparrowhawks, transporting them, releasing them (having first done tests to examine the suitability of release sites), and monitoring to see what happens to the sparrowhawks as well as the impacts of this on pigeons around lofts. I think it reasonable that such a trial could cost several hundred thousand pounds, and the preparatory work would be considerable.

Des