

1. Governance, planning and monitoring

A more detailed project plan should be submitted in support of this application. Some information relevant to a project plan has been provided with the application in the appendices, the Habitats Regulations Assessment and Disease Risk Assessment; however, the project plan should also address the following further information requirements. The [IUCN Criteria for Reintroductions and Translocations](#) provide a helpful information source for the project plan and you may also find the [Scottish Code for Conservation Translocations](#) a useful reference

1. Governance: Please provide a clear summary of the governance of this project, which shows how responsibilities for funding, resourcing, planning, monitoring and reporting are allocated.
 - This project sits as one of the actions in the [Defra Hen Harrier recovery plan](#). Defra have asked Natural England to take forward the plan on their behalf and Natural England reports back to the Upland Stakeholder Forum as well as to the Defra Wildlife Policy team.
 - To take forward the delivery of the Brood Management trial Natural England has set up a group with senior representatives from the Moorland Association, GWCT, ICBP and Hawk and Owl Trust and Prof Steve Redpath from Aberdeen University. The group is chaired by Natural England (Rob Cooke) and Natural England has, in exercising its statutory functions has the ultimate say on decisions. Decisions on resourcing and strategic planning all happen at that group.
 - The Moorland Association has agreed to fund the actual brood management part of this project for five years. That is the removal of eggs, hatching of young, rearing of young, return of the young for rehabilitation to the North of England moors. This has been set out in a contract between the [REDACTED].
2. Project aims/objectives: The plan must set out clear research objectives and clarify the links between the Kent University social science study and the brood management trial.

The Brood Management Trial group set out the following with regard to the trial purpose and the role of the social science study:

The trial would test

- a) The practicalities of brood management: can eggs or chicks be taken from the wild and raised in captivity, can those chicks be released back into the wild and what are the implications for productivity and survival.
- b) For changes in social attitudes by those involved in upland land management to the presence of Hen Harriers on grouse moors.

In addition the trial would report on the number and type of interventions undertaken.

It was acknowledged that it would be difficult to measure the success of the trial in terms changes to Hen Harrier numbers because there are other influences on this not least actions 1 to 4 of the recovery plan. Therefore any change in harrier numbers would be accounted to the plan as a whole although the social science undertaking would give us an indication of the direction of brood management's contribution.

The design of the Brood Management trial has had a long development, starting with the Environment Council Dialogue 2006 to 2012 and then through discussion at a sub group of the Uplands Stakeholder Forum chaired by Defra. It was this second group that developed the Hen Harrier Recovery Plan. During that process there were a number of iterations of the basic description of a Brood Management trail and 10 km between nests was the figure that was widely used. This in effect gave a confidence buffer to the Elston figure.

- How will hen harrier density be monitored to determine that the threshold density for brood management has been reached? Is there any forecast to suggest that this density will be reached within 5 years?
- The proposal is that if any two nests have a distance of less than 10 km between a brood management intervention can be triggered,
- It is impossible to forecast densities. There could be twenty nests in the English uplands in one year and no two were within 10 km of each other and so the density threshold would not be met. There may be just two nests in another year but they may be very close to each other and therefore trigger an intervention.
- As set out in point number 2 above, the trial is not just testing the practical aspects of a brood management scheme it is also testing the attitudinal response to the presence of a trial and the potential to remove nests if they go above a certain density.

Detail should be provided to explain how nests will be selected to be part of the Brood Management Trial. This should include information regarding whether the same locations/ nests will be subject to brood management each year or whether nests/locations will be alternated.

- Where two nests are located within 10km of each other and the landowner wish a brood management intervention one of the nests will be selected. Which nest is actually selected will depend on a number of practical factors which cannot be decided much before the event such as exactly where the nests are located, the timing of the nesting attempts and the desires of the landowner. Natural England, as part of the BM group will take the final decision on which nest
- If birds return to nest the year after a BM intervention and again contribute to a density which could trigger a brood management intervention the same nest will not be managed to avoid a single pair having repeated nest “failures”.

7. Release site assessment

- To meet designated site requirements, it is likely that there will need to be at least one release pen constructed in each SPA prior to any eggs being taken. Can you provide confirmation that preparations for construction of release pens in Bowland and the North Pennines SACs are in place? Please note that consent for siting of release pens must be agreed with the relevant NE responsible officers for the sites involved ahead of construction.

- The design and construction of the release pens is detailed in the application.
- The exact location of the pens will depend on the location of nests.
- The companies providing the materials have been contacted but there is little point in moving this on until we know we are getting a license to do this work

3. Capture, care and release of birds

3.1 Parent Harrier response to brood management

- What measures are in place to monitor adult responses to brood management?
 - Monitoring of adults behaviour and nests will be carried out as is currently done for nesting attempts and monitoring purposes, using NE staff and our network of volunteers.
 - By removing the eggs later the chance of recycling (laying a second clutch) is greatly reduced.
- What has been planned to address the risk of nesting birds laying a second clutch if the first clutch is removed as part of the brood management scheme trial?
 - By removing the eggs later the chance of recycling (laying a second clutch) is greatly reduced
 - In theory the second clutch could also be removed, a decision on the desirability of that would need to be taken by the BM trial group.

3.2 Collection of eggs and transport:

- Your application form and the associated appendices refer to possible taking of both eggs and chicks and there is some inconsistency in the additional information supplied with the application. Please clarify whether you are proposing to take chicks as well as eggs under this licence?

We would prefer to take eggs and that will be the default position. However it would be desirable to reserve the ability to take chicks should a nest be discovered late.

The Hen Harrier Recovery Plan implies that brood management would consist of complete clutches/broods being captive reared. Could you confirm that you intend to only undertake brood management when complete clutches /broods are to be taken?

Yes we will only take complete clutches.

What are the time restrictions in relation to eggs being laid and starting to hatch?

The incubation period is approximately 31 days. We would prefer to move the eggs later in this period as they will be well developed, stronger, and there is less likelihood of recycling

- What is the maximum number of eggs to be taken in any one year under your research plans?

A maximum number has not been set. Given the state of Harrier numbers at present it would seem very unlikely that, certainly at the start of the trial, this figure will be more than two or three clutches.

3. Rearing and release:

- Please provide further detail about the rearing methodology for newly hatched harriers and how this will reduce the likelihood of human imprinting.

Young raptors do not have particularly good eyesight in the first few days, they imprint more on sounds than sights early on. They are altricial and imprinting takes time. Harriers in general are not easy birds to tame. They also learn to self-feed from a bowl at an early age, less than ten days old. We will use mirrors, vocalisation sounds of Hen Harriers, and the chicks will not be handled other

than what is completely necessary. Once they can thermoregulate they will be moved into a pen where they see no humans at all.

- How will the long-term fitness of hand-reared birds be assessed? Most similar programmes using raptors in the UK use birds that have been moved from wild nests whereas this trial will use eggs hatched in captivity.

Long term fitness will be assessed by satellite tagging of birds and monitoring their success, movements and breeding success. This can be compared to data from naturally reared birds.

4. Release pens:

- Please provide further detail on the management of release pens throughout the trial: will these will remain in-situ or be moved year-on-year? How will the release pens be serviced?
- The release pens will be taken down and safely stored under cover after the harriers have dispersed. They will then be ready for putting back up in whatever area they are needed the following year.
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Please provide further detail on the extent of the release pens and their associated infrastructure. Further information should be provided such as a hide and accommodation, necessary adjacent habitat management and security measures proposed for the release pens.

The release pens are going to be built on the frame of poly tunnels. These are lightweight and easy to put up and take down. One end will be covered in a waterproof material under which the nest site will be placed slight off the ground. The whole structure will be covered in Terylene netting of one inch mesh, with a shade netting strip along the top. All will be held in place with strong nylon cable ties. There will be perches at either end, but not the middle to encourage the birds to fly from one end to the other and assist with flying fitness. There will be a food platform at one end which can be approached without the birds seeing. Food will be dropped in daily by the husbandry technician. The birds will be placed into the release site before they can fly so food will be dropped onto the nest ledge to start with and then onto a food table. A similar table will be placed outside with attendant perching so the birds can come back to a known place once they have been released. Until the actual site is seen and that will not be until we know where we are managing the birds it is difficult to describe approaches etc, suffice it to say that as we want this to work and we are experts in our field will be doing our best to make for the best results. There will be a normal canvas hide of which there is I believe a picture in the application put far enough away from the aviary to be non-invasive but close enough for those monitoring to be able to watch the birds. There is no accommodation planned. The release pen will be fenced around with fox proof fencing. Security measures will depend on the location of the pen and the perceived risk.

4. Post-release Monitoring and adaptive management

1. Satellite tags: Please confirm that throughout the project the number of eggs removed from the wild will always be limited to the number of satellite tags available. Please also provide confirmation regarding the number of satellite tags that the [REDACTED] currently has in

their possession, or has already ordered via Microwave Telemetry that are due to be received prior to the point of hen harrier fledging in 2017.

The Moorland Association will be purchasing the necessary tags for the brood management trial. We can confirm that no eggs will be taken from the wild unless there are tags available to track the birds when they fledge.

4.2 Please provide clarity on which individuals are to be monitored. Monitoring of control nests, not subject to the Brood Management Trial, would be a requirement of this project to allow the research objectives to be addressed. Sufficient satellite tags must be available to tag the broods subject to the Brood Management Trial and to tag control broods within the same geographical location that are not subject to Brood Management.

Natural England will continue to monitor nest not subject to BM as part of its ongoing monitoring work. To date we have sort to ensure that one or two birds from each naturally reared nest are tagged although for resource reasons that may need to be revisited if and when numbers of harriers build up.

To enable Natural England to make a timely assessment of your application, please could you provide me with the requested information by **Friday 28th April 2017**. If you are not able to supply any of the information at this time, then please let me know. Please do not hesitate to contact me should you wish to discuss anything further.

Kind Regards,

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