NATURE IMPROVEMENT AREA

GREATER THAMES MARSHES

OUR VISION for the Greater Thames Marshes is of "a living and vibrant marshland and estuary landscape where skilled and enthusiastic residents, visitors, businesses and technical experts are harnessed to work in partnership, delivering more wildlife, more public understanding and enjoyment of the environment, and greater resilience by the natural world to the changes brought about by development and climate change."

The Farmer Focus Group - Your Voice in the NIA
Predation and Chick Productivity Event

Thank you for your participation in the Farmer Focus Group Predation and Chick Productivity event, Thursday 23rd May 2013 at Elmley National Nature Reserve, Isle of Sheppey

Welcome and Introduction:
The event was chaired by Jim Seymour (Natural England) and Steve Gordon (ECT warden). Steve Gordon introduced Elmley Reserve, just under 1,000 ha of wet grassland on the Isle of Sheppey. Jim Seymour welcomed attendees to the day and gave apologies for Simon Hargreaves, the Natural England Advisor for Kent, and Emma J Sheard, the Farm Conservation Advisor for the NIA, whom could not make the day. The event was officially opened and Jim Seymour welcomed the start of the presentations.

Presentations:
Professor Sir John Lawton - Landscape Scale Conservation:
Professor Sir John Lawton opened the meeting with a presentation setting the scene on the importance of delivering conservation at a landscape-scale. Professor Lawton referenced the State of Nature report which showed that 1 in 10 UK species is at risk of extinction. Some of the biggest threats to wildlife are caused by human actions, such as loss of habitat through urbanization and pollution. In his words, we are "haemorrhaging wildlife at a devastating rate".

Professor Lawton was the lead author of a key report "Making Space for Nature" – which was the end product of a Government review looking at whether England's network of designated sites (e.g. SSSI's, NNR's, etc) are capable of delivering conservation action for nature now and for the future. The report found that the existing network was failing to deliver for biodiversity. The report suggested a series of recommendations, focussing on "more, bigger, better, joined."

View of Elmley NNR showing a wader scrape.

This has resulted in the selection of 12 Nature Improvement Areas (NIAs). These landscape scale initiatives are pilot studies designed to encourage partnership working towards a common goal - providing sustainable improvement for both wildlife and people. The 12 NIAs are each unique, covering a range of habitats from the Morecambe Bay in the North West to the Greater Thames Marshes in the South East. Each of these 12 NIA has it's own objectives and aims to follow, but they are all creating more and better-connected habitats at a landscape scale, providing space for wildlife to thrive and

adapt to climate change.

Q&A Session

If NIA's are a landscape scale approach, how can small sites such as individual farms contribute?

Unfortunately, small sites will always be at risk of isolation and vulnerable to random events and natural fluctuations. Therefore, small pockets of "wildlife friendly" areas cannot support a sustainable population of wildlife capable of surviving/adapting to climate change on their own. As a larger network of sites, however, small sites are a vitally important contribution. These sites can act as reservoirs, stepping stones, and restoration sites which, as a whole, can contribute to a landscape wide area managed for biodiversity. This network of small sites enables species to move freely across the habitat. Species need the ability to move between sites to forage for food, find breeding and over-wintering sites, and follow their climatic niche.

What is the criteria of success for NIAs?

NIAs are pilot studies that are government funded for three years only. In conservation terms, this is a very short time frame to detect change, as nature usually takes up to a decade for a statistically monitorable response to show from conservation efforts. Despite this draw back in the NIAs short time frame, each NIA is monitoring a variety of outputs ranging from public opinion to target species recovery. Success of these pilot NIA will therefore be gauged on whether the NIA can engage with key groups of people, such as farmers, to learn how to do things better and take this work forward beyond the initial 3yrs.

The commentary relating to the State of Nature report used very dramatic language about the condition of our wildlife, if this is an accurate representation of the level of threat then it is clear we need to do something about this. It is frustrating when people don't understand the issues we face when managing land, particularly as we need support from all levels to help deliver.

The State of Nature report presents a worrying forecast for the future of UK wildlife. It is through groups like this, and the NIA, that we can start communicating on the key issues and understand how we move forward to tackle these challenges. The aim of the NIA Farm Conservation Advisor is to work directly with those managing land to help identify the support needed for future success. Please get in contact with the NIA advisor for a site visit or to talk about issues or support you need to help deliver for nature on 07540 012 649 or emmas@greaterthamesmarshes.com

Martin Hall - The Greater Thames Marshes NIA:
Martin Hall, Director for Greening the Gateway Kent & Medway, gave a presentation to give some local context on the NIA by outlining the key objectives of the Greater Thames Marshes NIA. Martin was standing in place of Emma Sheard, the NIA Farm Conservation Advisor, who unfortunately was unable to attend this meeting.

As mentioned in the previous presentation by Professor Sir John Lawton, key to the success of the NIA will be maintaining the momentum and investment in people and delivery beyond the initial 3yrs funding period. Events like this Farm Focus Group are key to ensuring the NIA can be led from the bottom-up and deliver what people on the ground need to support conservation.

Martin provided a summary of the Greater Thames Marshes NIA 1st years progress, looking at 5 key

objectives:

1. *Mapping* – both of an ecological network (applying Lawton principles of “more, bigger, better and joined”) and also of issues and challenges, for example water availability and climate impacts

2. *Delivery on the ground* – creating new sites for wildlife through the Thames Terrace Invertebrate project (TTI) and capital works at an important site for breeding waders at Higham Marshes

3. *Partnership working projects* – joint efforts and targets between organisations in the area, and bringing people together to work for nature, such as the Farmer Focus Groups

4. *Communication* – ensuring we are getting the right messages to the right people (this is a two-way process between on the ground delivery and policy development)

5. *Funding* – as mentioned earlier, sustaining investment in the NIA is key to delivering outcomes for biodiversity

Dr Jen Smart - Here today... Gone tomorrow! The effects of predation on breeding waders:
Dr Jen Smart presented the results from research conducted by the RSPB looking at lowland breeding waders and predation. The predator/prey relationship is a complex but completely natural process. Typically population levels are controlled naturally by fluctuations in the prey abundance, disease or weather conditions. For example as prey availability decreases, the predator decreases. As a result of the decrease in predator, the prey population begins to increase. The increase in prey numbers results in increased food for the predators who then begin to increase in population and the cycle begins again.

There are times when we need to address imbalances in the system, such as unnaturally high predation levels. This can be the result of the loss of an alternative prey species resulting in the predator increasingly relying on a prey species of conservation concern.

In the case of breeding waders, 60% of studies in the scientific literature looked at suggested that wader populations were being limited by predators (please see Ausden *et al.* (2009) for a more detailed research summary report). To maintain a stable population of Lapwing you need chick productivity of 0.6 -0.8 fledglings per pair. To double the population in the system this could be up to 1.3 fledglings per pair (on average).

Research into egg predation shows that the majority occurs at night (8pm – 4am) and from nest recordings a significant proportion of this (92%) is mammalian (e.g. foxes). However when you look at predation on hatched chicks, predation is more of a mixed bag: 33% foxes, 6% mustelids, 23% raptors and 17% unknown. Therefore, when considering predator control mechanisms it is essential to understand the impacts of predation at each site:

- Is the predation having a significant impact on breeding waders?
- Is habitat managed in favourable condition?
- Are we seeing nesting successes? (eggs, chicks)
- Which species are causing the problem?

Dr Jen Smart, Senior Conservation Scientist at the RSPB presenting research on the impacts of predation on breeding waders.

Deciding which predator control mechanisms to use is reliant upon an understanding of the circumstances on a site-by-site basis. Options to consider include working at a nest level (e.g. Nest cages), field level (e.g. removal of predator perches) and lethal methods (these are of greatest impact where there is a higher density of predators).

Q&A Session

Has there been research into the cost/benefit of each of the methods for predator control such as fence types?

Yes. Ausden *et al.* (2011) published a detailed research summary report on the different types of fox predator control in the journal *Conservation Land Management*. But as an example of a cost, the combination fencing is £12 per metre.

Are there any sites elsewhere in the South East which are doing well without predation?

Some new sites do have good productivity, but it seems that predator pressure soon builds up and productivity declines. Most sites in the SE are performing badly and predation is considered a major issue in these cases.

Phillip Merricks - Increasing chick productivity: A case study at Elmley NNR:
Philip Merricks gave a presentation outlining his research and how he came to the decision to undertake predator control measures at Elmley Nature Reserve. He began by referring to the dramatic statistics in the State of Nature Report which provide the imperative for action – just to maintain a population we need chick productivity on average of 0.7 per breeding pair.

Phillip continued by outlining the separate components of conservation delivery for breeding waders on grazing marshes, and how these differ before and during the nesting season. The 5 components of management are:

1.Grazing regimes and sward length

- *Before the breeding season:* Winter grazing with cattle helps to achieve a very short sward with a few tussocks for chicks and insects to hide in.
- *During the breeding season:* Very low stocking density to reduce trampling of nests and maintain a short sward. Dung from cattle also provides a food resource of flies.

2. Water management and availability

- *Before the breeding season:* High % surface water flooding in the field. This is also used as a wintering and feeding sites for waders and geese.
- *During the breeding season:* Surface water flooding begins to decrease exposing soft muddy patches that are the ideal feeding sites for chicks.

3. Micro-topography

- *Before the breeding season:* if not already in place, try to create natural rills and scrapes
- *During the breeding season:* the rills and scrapes hold water for longer as the surface flooding in the field decreases.

4. Predator control

- *Before the breeding season:* Install fencing prior to the breeding season to reduce disturbance.

- Ensure there are no predators within the fenced area by lethal control. If you do not have fencing, and predation levels are severe, a concentrated effort of predator control prior to the breeding season will help to ensure more moderate numbers.

- *During the breeding season:* be sure to monitor predators within the fenced area. Even one predator will have effects. If you do not have a fence, still carry out low levels of lethal predator control.

Site visit at Elmley to view predator fencing.

Phillip emphasised the importance of delivering the whole package to get results. Breeding waders are incredibly fussy and it is a waste of resources to only deliver on part of the process as you will be limited by other factors. An understanding of site characteristics will help identify how you weight the amount of effort put in to each of these management tools.

Q&A Session

Thanks for that great explanation of how you need to manage marshes. I would be interested to hear what the fledging success rate has been at a nearby RSPB managed site – Cooling Marshes?

As a science-based conservation organisation, the RSPB is keen to learn how best to deliver conservation. The RSPB has previously not undertaken predator control on the Hoo Peninsula, but as research in this area develops, such as the evidence we have heard today from Dr Jen Smart, we are beginning to uptake this process. As an example, our reserve at Shorne Marshes has started lethal controls and predator fencing.

Predator control always seems to become a political issue and organisations like the RSPB are sometimes the worst offender when it comes to managing this.

Land management is a tricky and complicated thing, particularly for an organisation such as the RSPB which is accountable to a large membership base. The key is to ensure that the actions we are taking on our land is taking into account impacts on the wider system – it is important to maintain balance. As mentioned above, we are still learning and testing different measures on the basis of research.

It's great to be at a gathering where the focus is on "outcomes" rather than just monitoring the processes. We need to measure outcomes (i.e. chick productivity) and be given clear guidance on how to do this.

There is a lot of support for this and we have guidance for how to monitor chick productivity through a series of surveys during the breeding season. The Greater Thames Marshes NIA and the RSPB are also working together to provide free surveys for those interested in monitoring breeding waders and chick productivity on their land. Please get in contact with the NIA Farm Conservation Advisor to register your interest for free surveys for next year, or to find out more information on 07540 012 649 or emmas@greaterthamesmarshes.com.

Open Floor Discussion and AOB:

Formal discussion was followed by a visit to the predator fencing on site at Elmley National Nature Reserve which sparked a series of conversations, particularly considering the practicalities of installing

such comprehensive fencing. Discussions continued over lunch back at the barn.

Where will the NIA go from here?

- Feedback from this event will help to tailor the next meeting of the Farmer Focus Group. Please complete the feedback forms here

- The NIA is working to create a monitoring programme for predation in the Greater Thames Marshes. This will help to guide funding and support in key areas for breeding waders being affected by high predation levels.

- The NIA is working to create a project to increase the availability of water in the North Kent Marshes— providing quality habitat for breeding waders and wintering wildfowl/waders and helping to combat the effects of climate change.

- The NIA is working with landowners and farmers within the Greater Thames Marshes NIA to monitor chick productivity. To register your interest for free breeding wader and chick productivity surveys for 2014, please contact the NIA Farm Conservation Advisor.

- The NIA is providing free on site advice for land management for breeding waders. If you would like a free site visit, or to arrange a meeting to discuss your ideas on the support you need to deliver for wildlife please contact the NIA Farm Conservation Advisor.

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