We write this Open Letter on behalf of Scottish Gamekeepers Association (SGA) members, who formed a part of the Strathbraan community; a body of people in an area of Perthshire who came together to make an application to Scottish Natural Heritage (SNH) to protect the nests of red listed wading birds from being predated by juvenile flocks of incoming ravens in the Strathbraan area.

There has been considerable external commentary surrounding 3 years of work undertaken by the Strathbraan Community Collaboration for Waders (SCCW) in dialogue with SNH and other stakeholders, much of it, at best, an interpretation.

SGA members within the community wish to clarify the story behind hundreds of volunteer hours invested to protect iconic birds such as the curlew by a local community consisting principally of farmers, gamekeepers and private individuals. Had this work been given a financial evaluation, it is likely that it would have cost the tax payer a six figure sum.

After living through this experience, it remains the view today, from the SGA members within SCCW, that:

- without targeted and accelerated conservation action in Scotland, the curlew- classed as the UK's most pressing conservation priority- will become extinct, globally, in our lifetime.
- there is now a responsibility for heritage bodies and government departments to do more than pay lip service to adaptive approaches if this tragedy is not to unfold on Scotland's soil.
- SNH's failure to take forward an adaptive project in Strathbraan could regrettably prove to be a defining moment in the plight of the curlew.
- Politics and the fear of campaigners, legal challenge and adverse publicity is now disabling public agencies from delivering the type of bold actions required to fix conservation emergencies, such as those facing the world's wading birds.

Problem and context

Three years ago, a multi-party project *Understanding Predation (UP)*, commissioned by Scottish Government, funded by the taxpayer and led by Scotland's Moorland Forum acknowledged the emergency facing declining wading birds such as the curlew.

The UK holds a quarter of the world's breeding curlew yet populations have crashed by half in only 25 years. Across Europe, the estimated breeding success per pair is only 0.34 chicks per nest- not enough to prevent further declines.* (1)
There has been an 11 percent range contraction in Scotland in only 20 years. To make the step towards population stability, nests and young must be protected. Stability means that an average of 0.48-0.62 young per pair, per year, must survive. What happens in Scotland will impact on the curlew's future, worldwide.

The final published document from *UP* outlined 1/ the need for urgent action 2/ That consideration be given to collaborative, adaptive approaches.

'Adaptive' approaches were developed by fisheries scientists in the 70s and have been utilised in situations where there is substantiated concern over the potential loss of a species.

Adaptive Management allows for the fact that knowledge is *not complete* but 'allows management to advance with incomplete and therefore uncertain knowledge'. (2) It is about learning from actions, monitoring impacts and adjusting accordingly. It is therefore appropriate to situations such as this where time for more science is scarce (due to the speed of the birds' decline) and appetite for further research is acknowledged to be limited or unnecessary, as *UP* observed.

On the Steering Group of *UP* were academic institutions, landowners, Govt, SNH, Cairngorms National Park, SGA and RSPB Scotland. The paper was launched in Feb, 2016.

To arrive at its conclusions, farmers, gamekeepers, foresters, environmentalists and many others - with a common goal of saving threatened wading birds- gave of their time voluntarily to meet, debate and produce

evidence. It was hailed a unique and progressive project. It attempted to unite empirical or 'local' knowledge of those working every day in the countryside with the scientific evidence already in existence.

That paper formed the cornerstone of the present action project, again funded by Scotland's tax payers, *'Working for Waders'.*

Individuals, who would later come together as the SCCW fed into these discussions. They also had, on their doorsteps - and by virtue of the active management on game estates and farms in the area- one of the healthiest assemblages of wading birds seen anywhere in Scotland.

Strathbraan

An RSPB Tayside Wader survey summary report in 2013 described parts of Strathbraan within the licensing area as 'nationally important' for breeding waders. Strathbraan East was described as nationally important for curlew, lapwing, oystercatcher and snipe. Strathbraan was classified nationally important for lapwing and oystercatcher.

An area, principally, of hill edge livestock farming and heather moorland, managed for grouse shooting (which is scientifically proven to benefit wading bird species) (*3) Strathbraan has offered refuge to wading birds for decades. Despite this, and despite there being little change in management practices in the area, land managers had observed for a number of years that populations were declining.

Members of SCCW monitored the waders in the strath using approved transect count methodology, submitting them to SNH through the Game and Wildlife Conservation Trust (GWCT) who, like the SGA, gave technical support and advice to the community in their wader effort.
The SCCW also submitted raven counts as baseline data for their 2018 license application.

The Strathbraan side-show

Part of the media side-show to the issuing of the 2018 *Research* license focused around the motivation of the community, specifically the claim that the issue was about saving red grouse for shooting.

This distraction was used by opponents to weaponise opinion against the community, to inflame and polarise the narrative. RSPB Vice Chairman Chris Packham wrote to SNH Chairman Mike Cantlay in unflattering terms and encouraged others to do so. Mr Cantlay received death threats shortly after.

Although insulting to those in the community who had already put in considerable effort to get to that point, in offices, village halls and in the field, the protestations from opponents were not unexpected. Indeed, they had surfaced many months beforehand.

When Moorland Forum originally sat around the table to discuss the parameters for the *UP* project, conservation stakeholders requested that the scope of inquiry (into upland predation) be extended beyond waders to include the predation of game birds, principally red grouse.

It was the SGA who stipulated that the work should focus exclusively on declining wading birds. Conflating different issues would dilute the intention of the work.

Despite this intervention at official level, this accusation (that the wader conservation efforts of gamekeepers in Strathbraan was all about grouse) was, nevertheless, still thrown at the community after SNH and SCCW attempted to convert the findings of *UP* into action.

It should be noted, also, that in 2014 (before any multi-party investigation into the decline of waders had been conceived), it was the SGA who was demanding, in its Year of the Wader programme, that Scottish Government act urgently or face Scotland's populations of curlew, lapwing and golden plover going the same way as Wales' and Ireland's.

In the year prior to SCCW's application to SNH (talks began in 2017), grouse moors within the Strathbraan license area had enjoyed another healthy season. There had been no need for anyone to control ravens to have grouse on these pieces of land (other than licences in the area to protect sheep) as had been amply demonstrated. Similarly, the local farmers on the glen floor didn't care a jot about grouse. Grouse were nothing to do with their livelihoods. If the gamekeeping members of the community had wanted raven control to produce more numbers of grouse, they certainly misread the situation badly. The Beast from the East and a bone dry summer wiped out grouse productivity in the whole Strathbraan area in 2018 (the year when some raven control took place) and no driven grouse were shot at all in the entire region.

2018 License Application

After *UP* was published, SNH invited 'projects' to deliver what was learned.

Through phone calls, representatives made it known they wanted *UP* participants to come forward with collaborative projects to save waders. Officials knew they would receive habitat-focused projects. Environmental charities are masters at prising scarce funding for habitat but SNH also sought to encourage collaborative, practitioner-led projects which were adaptive in nature and built on learning from *UP*. What *UP* showed was that local knowledge from people on the ground was now just as valuable to saving waders as further unnecessary scientific inquiry. Science, whilst informing, was not getting the job done. If it was, the birds would have been way back from the edge rather than hanging perilously over the cliff.

Prior to these conversations, there was no intention from people within Strathbraan to apply for any license, nor could they have know what a license application - which might be considered feasible by SNH - would look like.

This collective ignorance about how licensing works as a mechanism for land managers has a history. Much to the SGA's frustration, SNH has never granted any licenses to those within the game sector seeking to deal legally with species conflicts. Despite levers existing under the Wildlife and Countryside Act 1981, licensing options have been largely illusory, other than the ability to operate within the General Licences. Ask the farmers on the west having to keep lambs indoors and diversionary feeding sea eagles to prevent them predating lambs and you will hear similar frustrations within each sector.

Most people making a living in Scotland's countryside today do not, as a rule, apply for legal licenses for species mitigation (means which are available to them) because a/ they know SNH will not grant them and b/ they know they will be targeted by activists and campaigners if they do. If you combine both *a* and *b*, you can see why people would rather not risk their own reputations, their employer's reputations, their personal and family safety or their mental health.

Add to this the fact that any license to control a protected species to conserve wild birds was novel in Scotland then it is understandable that those working around waders every day in Strathbraan- and seeing the problems facing their survival- would still not know how to solve the problem through a licensing route.

SNH had made it known in wider circles, however, that they would be responsive to adaptive applications. Initial talks with sectoral individuals started to put some flesh on the bones of what that might look like.

For the community, habitat was not the problem for Strathbraan's wading birds. The habitat was considered as good as found in any working landscape.

Indeed, right up until the final days of discussions with SNH, in 2019, this was acknowledged by the heritage body *and* its scientific advisors. They noted that rush cutting, grass topping, fodder cropping and the mix of open fields, field edge and moorland were all good for breeding waders. The legal control of other common predators of waders (notably foxes, crows and stoats) was also considered to be optimal, with considerable privately-financed gamekeeping effort being carried out within the proposed license area. Again, there was an understanding within SNH- and the community-that all legal alternatives had been tried in a bid to protect declining waders (a key test for any license) but that these alternatives were still falling short of what was needed to address wader declines.

The tangible difference the community felt could be made, very quickly, to improve wader survival was to protect their nests and young from predation by the juvenile flocks of ravens they had witnessed in numerous years entering the area and then sweeping the glen of eggs and chicks, leaving the parent birds and land managers powerless to do anything about it.

By making this observation, SCCW was demonised as people behaving with murderous intent. Yet, importantly, and after all that subsequently happened, their view, today, is the same as it was at the outset. Ravens take eggs and chicks of waders in Strathbraan, end of story. Asking them to think otherwise because it runs counter to popular opinion is like forcing people to un-see that which has already been seen.

In contrast to misrepresentative external commentary, the SCCW application did not seek to 'massacre', 'wipe out' or 'exterminate' ravens. It sought to take a number of juvenile ravens (this specified by SNH), proportionate to the population counts they undertook, in order to be able to protect the eggs and chicks of waders but so as not to impact the local conservation status of the raven.

The application was explicitly two-fold: to conserve wading birds *and* ravens. The control effort was to focus on incoming juvenile flocks rather than known nests. As ravens are highly intelligent, there was also an understanding that, by permitting some lethal control, ravens would not be able to build up in the area at key breeding time because, seeing the danger, they would move on. This proved to be the case when the license finally became operational.

Despite raging headlines quoting 'hundreds of ravens', the SCCW application, when passed, allowed for 69 ravens to be taken. This figure was arrived at by SNH using count data provided by the community (which matched Scottish Raptor Study Group data) and applied to a population modelling tool which had been developed by BTO. The community was to provide weekly data to SNH on ravens taken and strict conditions were placed on how ravens could be controlled.

Although the licence was earmarked to run, potentially, for 5 years, a new application would have to be made annually. It would be at this point that re-modelling of the count data would dictate how many ravens would need to be controlled, if at all, to boost wader survival in the next year, and so on. The notion pedalled by opponents that this was a 5 year open-ended 'license to kill' was an emotive falsification.

The License was granted by SNH as a *Research and Education* license, something which officials later admitted, with hindsight, was a mistake. The community had no bearing on this. This will be touched upon later.

In whatever packaging the license came, the community's intention and belief was always the same. They would count waders and count ravens, in a scientifically recognised way. If given the ability to protect those waders from flocks of juvenile ravens, they could push the declining waders back from the cliff edge or, at least, stop them dropping off. Ultimately, the raven population would not be impacted but the hope was that the wader numbers would. The license proposal has been designed in the way *UP* suggested. Collaborative, Community-based, practitioner-led. Because these people also had full-time jobs, they could no be expected to be able to fulfil or finance the level of monitoring time that fully-fledged, full-time repeatable scientific experiments traditionally involve. SNH noted this, attempting to harness the skills, fieldcraft and voluntary effort within SCWW, but trying not to tie practitioners in endless knots that would prevent the actual work getting done.

Whether some regard this approach unscientific or overly simple, the truth is that this approach, stemming from practical knowledge and daily observation was how the community envisaged the task ahead. Interestingly, until the license was suspended, the approach was seeing wader chick survival increasing. It was working.

For the first time in decades, nests were successfully fledging 4 curlew chicks. People who had worked in the area for most of their lives had not seen such high survival rates. GWCT scientists were asked to travel to the lower strath, by the community, to record and verify this activity. Having their reputations publicly trashed already, the SCCW knew their empirical version of events would be derided as folk tales. Although some of these highly successful nests fell outwith pre-set transect count areas, the impacts were nonetheless noted

and recorded, with SNH scientists agreeing later, in talks over a potential 2019 application, that this level of evidence and local knowledge would supplement and enhance data gathering and future learning.

Judicial Review

Whilst the 2018 license was operational, RSPB Scotland and Scottish Raptor Study Group were campaigning against it, with additional inflammatory forays by RSPB Vice President, Chris Packham. Ruth Tingay, author of a website seeking to ban grouse shooting, and now part of Wild Justice, then joined Scottish Raptor Study Group in issuing a Crowdfunding campaign to finance taking SNH to Judicial Review over the granting of the Research License.

SNH, to its credit, initially proved robust in its defence of the license, backing what the community was trying to achieve and acknowledging the need for adaptive approaches to learn more about the nature of raven predation of endangered waders.

However, the license was being labelled by opponents as a 'mass culling of ravens just to see what happens'.

Whilst clear in their wrecking intent, these binary statements failed to consider adaptive management in the round and the challenges both SNH and the community were trying to surmount to bring about a positive conservation end within a practitioner-led project.

SNH, wary of the impending Judicial Review, sought a meeting with community representatives and asked them to suspend the license until such times as their own Scientific Advisory Committee had appraised it and reported on their findings.

Confused and angry, community reps who were seeing the license working, asked if this was to be the end of the project to save waders simply because campaigners had signalled their intention to take SNH to Judicial Review?

The community view was that SNH and Scottish Government had a duty to prevent birds such as the curlew disappearing rather than meekly bowing to any crowd funded campaign which wanted to prevent difficult, but necessary, decisions being taken if it didn't fit their own wider agenda (to ban grouse shooting). What had been the point of £200 000 worth of tax payer's money being spent on *UP* and months of endless talking?

The community were told that this was not the case, that there remained an appetite within SNH to review and to build on what was learned, in a new application in 2019. Sceptical but angry, the community decided to hold SNH to its word on account of shared distance traveled. All raven control in the area was halted. The license was suspended. Effectively there was no remaining case for a Judicial Review to answer.

The role of SNH

Throughout the post-*UP* process, SNH attempted to remain faithful to what that project highlighted: the important role of local knowledge and how, along with science, tapping into this practitioner-led approach could unlock a new future for globally threatened birds such as the curlew. Previous approaches had, largely, failed. It was time for new remedies.

The truth is, however, that SNH, as a body, is not, at this stage, set up to deliver adaptive management approaches of this nature when it comes to conserving wild birds. What this means, then, is that (until SNH redrafts its own published guidance on the conservation of wild birds, which it admits contains a bar which is set too high for work of this nature), it cannot deliver the type of large scale collaborative, adaptive project, practitioner-led, which will benefit declining waders. Nor can it fulfil the adaptive approaches that *UP* identified. If Scottish Government believes it can, it is living under a delusion.

Ever fearful of reputation damage and legal challenge, SNH appeared to the community, at times, to be in a state of paralysis. There is some sympathy for their plight. However, it confused community representatives who, in the process of making a draft application in 2019 (there was never a formal application made, despite

erroneous reporting), agreed to all new additional monitoring requirements placed on them by SNH's Scientific Advisory Group and agreed to operate nest cameras to offer clues as to what other predatory pressures might be affecting waders, as well as ravens. The community moved a long, long way from what it believed it was signing up to, initially, but SNH's appetite seemed to have gone, even though they described the 2019 draft license as 'competent'.

In granting a license in 2018, only to ask the community to thereafter suspend it, so one half of SNH could check what the other half had done, was bewildering. In granting the license as a Research license, only to later find out from its own advisers that the monitoring requirements placed on the community would not effectively establish what the license set out to do, served to make the community look foolish while SNH was praised for 'taking public interest into account' and backing down.

When the community were then asked to pull the license, they also felt a sense of humiliation. It was, after all, not of their choosing what type of license had been granted yet it was their job to carry the can. Indeed, assurances had been given, prior to it being granted, that people 'upstairs' within SNH had been sighted on the application. What had started out as a collaborative, community effort to save waders became mired in the sort of campaigns and politics sadly crippling the countryside today.

As discussions unfolded into 2019, it appeared some arms within SNH were unaware what others were doing. Progressive voices within the organisation, seeking to find ways forward, appeared sidelined, promises were not kept, timelines lapsed (at SNH's end) and the community's well of patience ran dry.

Stumbling blocks which had previously never been mentioned in 2 years of talking, about habitat and quantifying predator control extent, were suddenly surfacing and the clock was running down. Again, terrified of legal challenge, events in England (where Natural England were threatened with Judicial Review by Wild Justice) were suddenly tossed around in conversations. Breeding waders were already in the fields and the community wanted to be able to protect them but the SNH wheels were grinding far too slow.

When the ravens come in, the birds will just have to take their chance.

Whilst there is some evidence, in a 2010 RSPB/SNH/Aberdeen University (Dr Arjum Amar) paper, of a weak relationship between raven predation and wader decline (the paper did say, however, that predation of curlew and lapwing by ravens merited further research), there is also evidence of very strong relationships between raven predation and wader declines. SNH did not deny this. It couldn't. One of its key scientists, Des Thompson, was the co- author of a study which put nest failure of dotterel in the East Drumochter Plateau down principally to raven predation, at a statistically significant degree.

Interestingly, that paper seemed to shuffle from public view, with many feeling its conclusions were too much for conservationists to stomach. When members of SNH's Scientific Advisory Group visited Strathbraan this year, scientists there, including an RSPB scientist, acknowledged that ravens *will* take wader eggs and chicks and that there was an opportunity to understand the extent of this relationship better.

This is what the Strathbraan Community was trying to do: to begin to arrest the alarming decline of the birds through proportionate action (which would not affect the conservation status of the raven) whilst learning, recording and adjusting that learning along the way. In other words, adaptive management. That will not now happen. Despite being asked to do so in more than one meeting, they resented ridiculous suggestions that entering into 'partnership' with the very people who had taken SNH to court over the license, or with the RSPB, who had fought against it from the outset, would make its work seem 'more defensible'. For SCCW, defending the curlew was surely a defence in itself.

In the end, with patience exhausted, the community tasked SNH with proposing its own adaptive project, rather than continue a negotiation which had become a one sided tennis match; the community making suggestions and accepting even more scientific monitoring burdens only for SNH to bat the ball away and offer nothing itself.

The community made it known they would not take one penny of public money to save wading birds as it became clearer, though SNH did not say it, that a practitioner-led initiative was no longer on the table. Instead, a multi-year project involving lots of science- and not insignificant sums of public money- would be easier for SNH to 'defend'.

All the learning from *UP* seemed to have extinguished at that point and the community were happy to leave multi-year studies to scientists looking for work and public cash because it was this very approach, it felt, that had led wading birds to the edge in the first place. SNH's plan was received in good faith but, to the SCCW members it looked very similar to the type of projects which had simply led to more and more research, with little actual conservation. As people with day jobs, years of monitoring demise was not worth it. The appetite for this type of project at a time when the SCCW felt worn down by years of effort (remember, it was stated following *UP* that no more science was required for SNH to find out the problems facing waders*)* had diminished.

SCCW members will continue to protect wading birds as best it can, through skilled legal predator control and unsubsidised habitat management, and will know that it tried to rectify a situation it had observed as a significant problem, with the tools and the time it had. Areas such as Strathbraan are the remaining population 'cores'. When these slip further, the end could be quick.

The SGA members of that community hope SNH can identify new ways and the necessary courage to progress the adaptive management tools it says it believes are necessary, and that conservation by petition does not prevent all natural heritage bodies from making the difficult wildlife management decisions sometimes required. Sadly, though, this is the way it looks to be going. Wildlife protection at all costs and wildlife conservation can be two very, very different things.

The newly published BTO Breeding Bird Survey shows the Curlew has declined 61 percent in Scotland since 1997. In that exact same time-frame the raven has increased 36 percent and their 60 percent increase in one year, between 2017 and 2018, was the highest of all 68 birds recorded by survey monitors (4)* The people of Strathbraan have witnessed ravens taking Curlew chicks and eggs and even a Raptor Study group monitor in the area said exactly the same thing. In short, people know the problem but can't, or won't, act.

Whatever happened in Strathbraan, there remains a duty to understand that relationship, between wader survival and raven predation, better. We should not allow the Curlew to disappear while we are trying to write up the findings.

The Scottish Gamekeepers Association, May 2019, on behalf of its members in Strathbraan.

* (1) (1) Roodbergen M, et al. Journal of Ornithology 2012; 153: 53–74.
* (2) https://www.nature.scot/sites/default/files/2017-07/Publication%202015%20-%20SNH%20Commissioned%20Report%20795%20-%20A%20review%20of%20approaches%20to%20adaptive%20management.pdf
*(3) https://www.gwct.org.uk/research/species/birds/lapwing-and-other-waders/predator-control-and-moorland-birds/
(4) https://www.bto.org/sites/default/files/bbs-report-2018.pdf