Assessment of the Guga Hunt in the Context of Seabird Conservation in Scotland

The Scottish Seabird Centre

Emily Burton, Emmet Byrne, Fanny Royanez & Emma Marriott

Summary

Seabirds are among the most threatened groups of birds globally, with widespread declines driven by climate change, fisheries interactions, disease and broader environmental pressures. In Scotland, breeding seabird populations have declined substantially in recent decades, while recent outbreaks of Highly Pathogenic Avian Influenza (HPAI) have caused significant mortality in several species, including Northern gannets (Morus bassanus).

The Guga Hunt on Sula Sgeir is the last remaining traditional seabird harvest in Scotland. In 2025, NatureScot reduced the licensed harvest from 2000 to 500 gannet chicks following new evidence of population decline after HPAI outbreaks. Interim modelling suggested that a harvest of 500 chicks may allow the colony to remain broadly stable over 25 years, but that recovery would likely be suppressed. The assessment also acknowledged important limitations, including that the modelling did not account for future disease outbreaks or immigration between colonies.

This report considers the continuation of the hunt within the wider context of seabird conservation in Scotland. It concludes that there is currently insufficient evidence to demonstrate that the hunt can continue without adverse impacts on internationally important seabird populations and protected species breeding on Sula Sgeir. Alongside the removal of gannet chicks, concerns remain regarding disturbance impacts on other breeding seabirds, including northern fulmar, European storm petrel and Leach's storm petrel.

In the context of ongoing seabird declines, unpredictable disease impacts, slow recovery rate of gannets and poorly understood pressures caused by disturbance, this report recommends that licensing of the guga hunt should be permanently ended. This recommendation is made not in disregard of the hunt's cultural significance, but in recognition that environmental conditions have changed fundamentally and now require a more precautionary approach to seabird conservation.

The report also calls for:

- comprehensive and regularly updated seabird monitoring,
- detailed assessment of disturbance impacts on breeding seabirds,
- improved population modelling incorporating disease, immigration between colonies and cumulative pressures,
- public access to survey, monitoring and modelling data used in licensing decisions, and
- collaborative work with the Ness community to support cultural heritage and involvement in seabird conservation and monitoring on Sula Sgeir.

Introduction

Seabirds are widely recognised as one of the most threatened groups of birds in the world, with many species undergoing sustained population declines over recent decades. These declines are driven by a complex combination of pressures acting across both marine and terrestrial environments. Large-scale assessments indicate that the most pervasive threats include incidental mortality in fisheries (bycatch), invasive non-native species at breeding sites, and climate-driven changes to marine ecosystems (Dias *et al.* 2019), alongside additional pressures such as overfishing, pollution, disturbance and offshore development. Importantly, the majority of seabird species are affected by multiple interacting threats, which can operate cumulatively or synergistically to reduce survival and breeding success.

In Great Britain, these global patterns are reflected in marked long-term declines in nationally and internationally important seabird populations. Here, 69% of regularly occurring breeding seabird species are assessed as being threatened with extinction from Great Britain (Stanbury *et al.* 2024). Of the seabird species regularly breeding in the UK, the vast majority are on the Amber or Red list of Conservation Concern. Monitoring data from Scotland indicate that overall seabird abundance has fallen substantially since the 1980s, with recent assessments suggesting that breeding numbers are now approximately half of historical levels (Scottish Biodiversity Indicator).

More recently, disease has emerged as an additional pressure within this already complex landscape of threats. The 2021-2022 outbreak of Highly Pathogenic Avian Influenza (HPAI) has been linked to substantial decreases for several of the UK's breeding seabird species (Tremlett *et al.* 2024, (A)). While disease represents a significant acute pressure, its impacts are likely to

interact with existing environmental stressors, potentially constraining recovery in populations already under pressure from reduced food availability and other anthropogenic influences.

The scale and urgency of the challenges facing seabirds are recognised in the Scottish Seabird Conservation Action Plan, which emphasises that Scotland supports internationally significant seabird populations but that many species are in decline and require coordinated conservation action. The plan highlights the need to address multiple pressures simultaneously, improve understanding of population dynamics, and implement targeted measures across breeding and foraging habitats to secure the long-term viability of seabird populations.

Against this broader context of cumulative and interacting threats, understanding the status and resilience of seabird populations in Scotland is critical. This is particularly relevant for species such as gannets that are both ecologically important and culturally significant, including in relation to traditional practices such as guga hunting.

The Northern gannet

Northern gannets (*Morus bassanus*), hereafter gannets, are one of the largest seabirds in the North Atlantic and a prominent marine predator. Adults are distinctive, with predominantly white plumage, black-tipped wings and a dusky-yellow head, while immature birds are dark grey-brown and gradually acquire adult plumage over several years (Figure 1). They are adaptable feeders, catching a broad range of species including fish such as mackerel, herring and sandeels. Their fishing techniques include their iconic high-speed plunge dives, forming an 'arrow' shape in mid-air and plummeting head-first into the sea, sometimes from a considerable height.

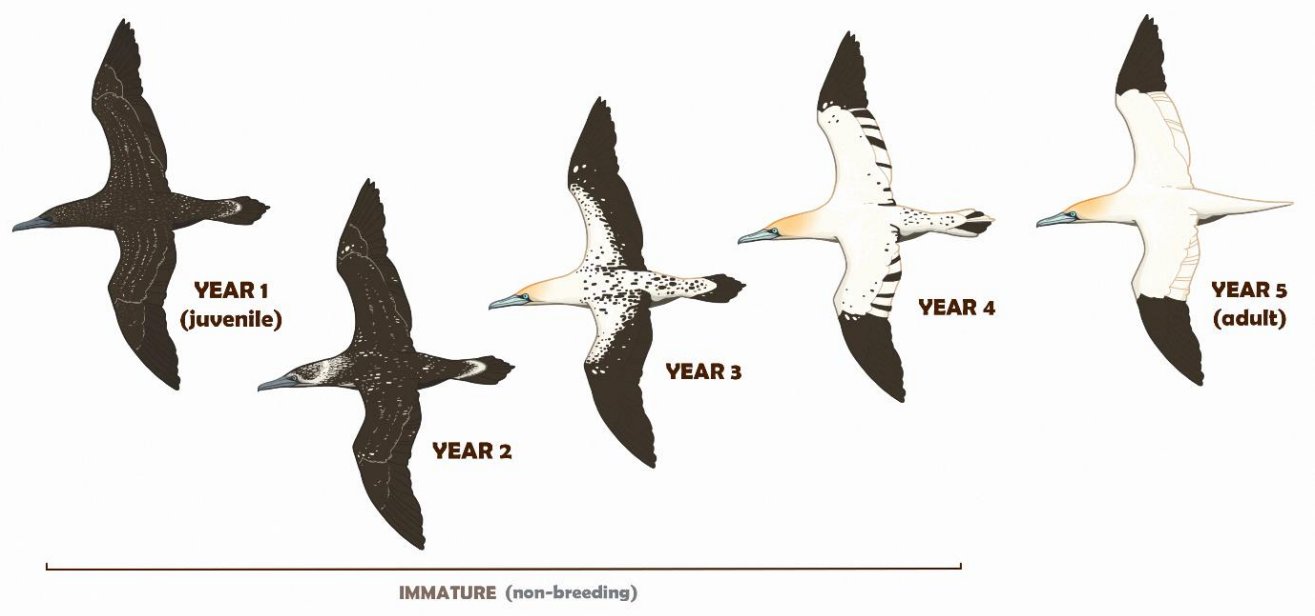

Figure 1: Gannet plumage changes over their first 4 years, before they reach adult plumage at 5 years old. © Emma Marriott, Scottish Seabird Centre

Gannets exhibit a classic “slow” life history strategy typical of many seabirds. Individuals generally do not begin breeding until 4–6 years of age and lay a single egg each breeding season. Incubation lasts approximately six weeks, and chick-rearing is prolonged, with fledging occurring after roughly 12–13 weeks (Figure 2). This extended parental investment reflects the importance of maximising offspring survival in a species where reproductive output is low. The typical life expectancy of a gannet is 17 years, however the oldest ringed bird recorded was 37 years old (BTO).

Figure 2: Gannets care for each chick for around 12-13 weeks before they fledge. During this period, chicks moult from fluffy white down to mottled dark grey feathers. © Emma Marriott, Scottish Seabird Centre

Adult survival rates are typically high, often exceeding 90% annually (Wanless *et al*. 2006), meaning population trends are particularly sensitive to changes in adult mortality. Gannets breed colonially, often in very large aggregations on offshore islands and steep coastal cliffs, where the high density of nests may increase vulnerability to certain pressures.

Approximately 84% of Britains gannets can be found in Scotland (Scottish Seabird Conservation Action Plan). Two of the largest gannet colonies in the world are St Kilda and Bass Rock, each currently supporting more than an estimated 50,000 breeding sites during the breeding season (Burton *et al.* 2026, Nisbet *et al.* 2025).

Gannets are highly seasonal in their use of Scottish waters. Adults usually return to breeding colonies between February and April, remaining until chicks fledge, typically between September and October. Outside the breeding season, individuals disperse widely, with many heading for wintering grounds in the southern North Sea, the Mediterranean or West Africa.

Conservation status

Within the UK, gannets are classified as an Amber-listed species under the Birds of Conservation Concern framework, indicating unfavourable conservation status. The Scottish gannet population is distributed across relatively few sites during the breeding season, meaning that a catastrophic event at a single site, like an extreme weather event or disease outbreak, could have population level impacts (Figure 3).

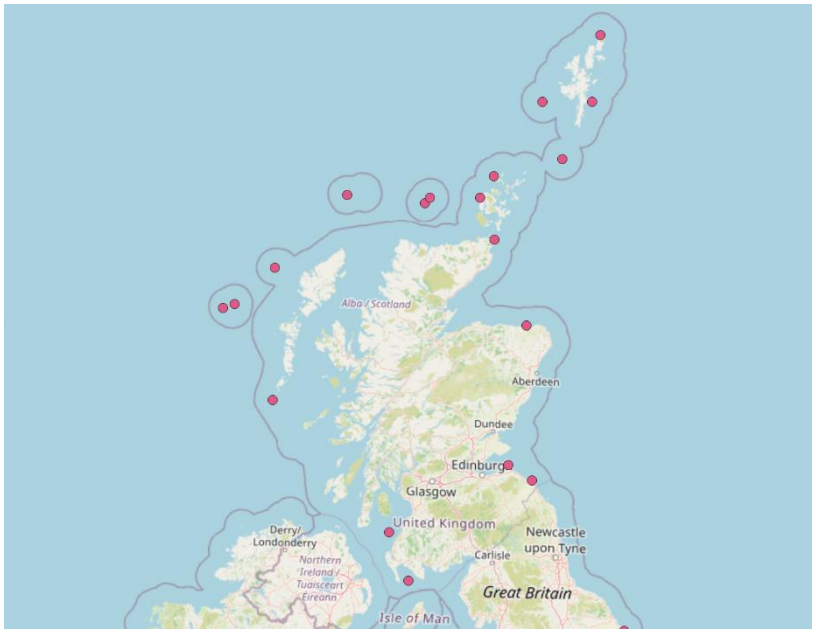

Figure 3: A map showing the distribution of gannet colonies around Scotland. Base map: OpenStreetMap.

While gannet populations increased during much of the 20th century, there is growing evidence that, like other seabirds, they are increasingly exposed to a range of environmental and anthropogenic pressures. These include climate-driven changes in prey availability, interactions with fisheries (including bycatch), pollution, and offshore development.

More recently, disease outbreaks are also of increasing concern. HPAI has caused substantial and unprecedented mortality in Scottish gannet colonies (Lane *et al*. 2024), highlighting the vulnerability of colonial seabirds to emerging threats. In fact, adult mortality levels are so high that it may take until 2041 (19 years) until some colonies can recover to pre-HPAI levels (Lane *et al*. 2026).

Given Scotland's international importance for gannets, changes in their population have implications well beyond national boundaries. Developing a robust understanding of their ecology, population dynamics and the pressures they face is therefore essential for informing effective conservation and management, particularly in contexts where ecological and cultural considerations intersect.

Monitoring of gannets in Scotland

Since the 1980s, breeding seabirds have been monitored and the results collated in the Seabird Monitoring Programme. Methods are formalised in the Seabird Monitoring Handbook for Britain and Ireland, which has formed the foundation for seabird survey work. The handbook emphasises that monitoring should provide "information on breeding numbers, population changes, and breeding success" using practical and repeatable field methods suitable for long-term conservation purposes (Walsh *et al*. 1995).

For gannets, the commonest approach is to count Apparently Occupied Sites (AOS), defined as nesting sites occupied by one or two birds (whether nesting material is visible or not). Counts are undertaken during the breeding season (usually in June or July, with a buffer from mid-May to mid-August), when birds are present at colonies, and follow strict guidance to ensure consistency between years.

At large or inaccessible gannet colonies, most surveys have been completed using aerial photography from an aircraft, sometimes supplemented by boat or land-based counts. While these methods enable coverage of extensive colonies, they sometimes face challenges associated with cost and logistical difficulties. Recent monitoring at some sites – including Bass Rock - has now shifted towards drone-based surveys (Burton *et al*. 2026).

The frequency of gannet monitoring varies by site and scale. At a local level, some colonies have been surveyed regularly since the mid-20th century, providing long datasets able to show detailed population trends at these sites. However, more broadly, national censuses of seabirds provide periodic full-colony counts across Britain and Ireland, typically at decadal intervals (Burnell *et al*. 2023, Seabirds Count).

In addition to colony counts, breeding success (productivity) is monitored at a smaller number of colonies. This type of monitoring, though vital for fully assessing population health, is more labour-intensive and therefore typically restricted to selected sites. These studies can provide important insights into some of the potential drivers of population change, complementing count data.

Robust monitoring is essential for understanding the status of gannet populations in Scotland. Long-term datasets allow changes in population size to be detected, while comparable or consistent methodology ensures that trends can be interpreted with confidence. As highlighted by ongoing monitoring programmes, without regular counts it would not be possible to track population change or provide the evidence base required for conservation action.

Monitoring gannets on Sula Sgeir

Sula Sgeir is a small uninhabited island located about 40 miles north of Lewis and 10 miles west of North Rona (Figure 4). Today, Sula Sgeir and North Rona are a designated Special Protection Area (SPA) (Nature Scot, Site 8558) and Site of Special Scientific Interest (NatureScot, Site 1240)

Figure 4: Google Maps (2026) Sula Sgeir, 1: 3400. Available from: https://maps.app.goo.gl/jc8tyCU916BsB89V9 [Accessed 27th April 2026].

for their importance for seabird and marine mammal species. Sula Sgeir is the smaller of the two islands and is thought to have been occupied by gannets since at least the 16th century.

Monitoring of gannets on Sula Sgeir has been carried out through a series of surveys since 1969, when the RAF surveyed the colony as part of Operation Seafarer and 8,964 pairs occupying nests were recorded (Cramp *et al.* 1974). More recent counts (1985 – 2024) divide the colony into consistent counting sections to allow comparison over time and estimate breeding population size by counting AOS. The AOS estimated for each of these counts is shown below (Table 1).

Table 1: Counts made of the Sula Sgeir gannet colony since 1985. Individual reports referenced, but this data is also collated through the Seabird Monitoring Programme (SMP).

Year of Count	Population [AOS]	Reference	Notes
1985 (15th July)	9,143	Murray *et al* . 1986	
1994 (15th July)	10,440	Murray *et al* . 1997	Used as the SPA citation population, 2001.
2004 (26th May)	9,225	Wanless *et al* . 2015 (A)	
2013 (18th June)	11,230	Wanless *et al* . 2015 (B)	
2017 (30th June)	12,271	Burnell *et al.* 2023	It is unclear why this count, included in Seabirds Count, has been catagorised as 'non-standard' in NatureScot's 2025 licencing report.
2023 (21 July)	9,495*	Tremlett *et al.* 2024 (B)	*Tremlett *et al.* 2024 indicte that for some count sections observer variation was particularly high (up to 15% from the mean count) therefore confidence is low for these results.This data has therefore not been included in the plot (Figure 5).
2024 (18th June)	10,200	APEM Ltd. 2024	

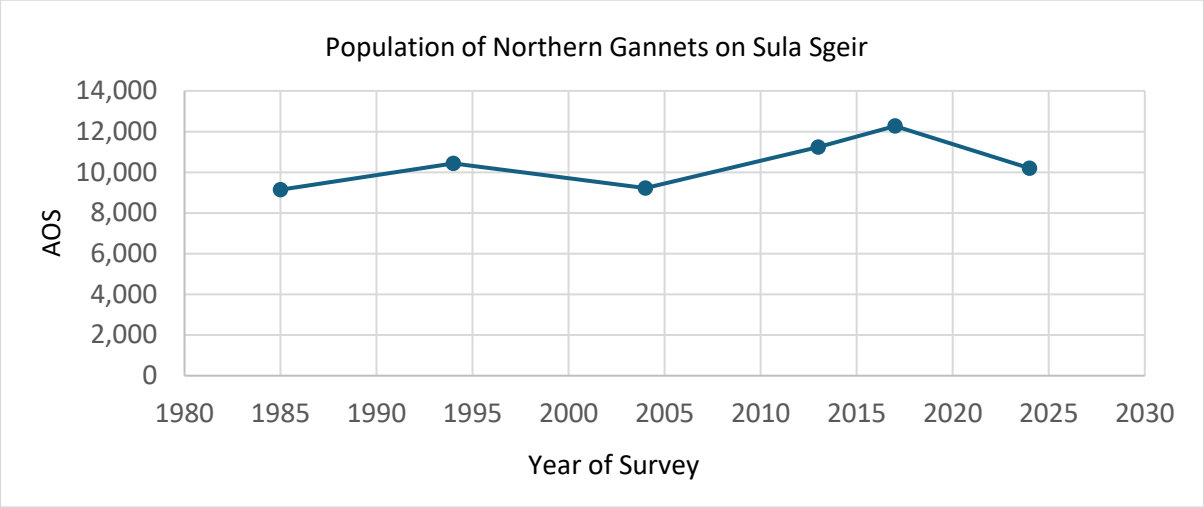

Figure 5: Population estimates for the Sula Sgeir gannet colony since 1985, based on the data in Table 1.

The 2024 survey was undertaken by APEM Ltd., who were commissioned by NatureScot to conduct a full-coverage digital aerial survey from an aircraft. High-resolution oblique and vertical images were collected, and images were analysed using GIS, with analysts identifying and counting individual AOS. Immature and loafing birds (which were thought not to be breeding) were excluded, and counts were subject to quality assurance checks, with minimal differences (<1%) between initial and verified counts, indicating high reliability.

The 2024 survey recorded approximately 10,200 AOS, representing a decline of around 17% since 2017 (Table 1), which was the last count carried out before the HPAI outbreak. However, it is probable that the actual decline in population was more significant than is shown by these figures. Seabirds Count estimated that (based on colony specific trends) the population on Sula Sgeir in 2021 may have been approximately 13,400 AOS (Burnell *et al.* 2023). When compared with the 2024 count, this indicates a potential decrease of around 24%.

It is likely that a survey was also commissioned by NatureScot in 2025 on Sula Sgeir. However, the data from this survey could not be accessed at the time of writing, so is not covered in this report.

Historical relationships between people and seabirds in Scotland

Seabirds have played a role in human subsistence and culture in Scotland for centuries, particularly in remote island environments where alternative resources were scarce. In locations such as St Kilda, they formed the foundation of local subsistence economies, providing essential resources including meat, eggs, oil and feathers (National Trust for Scotland).

A wide range of species were utilised. Northern gannets were harvested primarily for their meat, particularly their chicks, while Northern fulmars (*Fulmarus glacialis*) were also key resources, valued additionally for their oil. Other cliff-nesting species were exploited for both meat and eggs.

Harvesting relied on specialised techniques, often involving the use of ropes to access birds and eggs on steep sea cliffs. This was a skilled and often hazardous activity, typically carried out cooperatively. Its importance is reflected in the built environment of St Kilda, where stone storage structures ("cleits") were used to preserve seabird products and equipment (National Trust for Scotland). Seabirds were used efficiently: feathers for bedding and clothing, and oils for fuel, lighting and waterproofing.

Seabird exploitation was not limited to remote Western islands. For example, on Scotland's East coast young gannets (or guga) were hunted at sites such as the Bass Rock, where they contributed to local subsistence and seasonal economies. "Solan geese" were valued and traded, and (when available) were sold in Edinburgh at the poultry market throughout August and September (Gurney 1913). Extensive information exploring the relationship between people and gannets in Scotland can be found in Bryan Nelson's book 'The Gannet' (1978) in the chapter titled 'The gannet and man'.

Although such practices could historically be sustained in highly productive and isolated systems, modern evidence indicates that several Scottish seabird species have experienced marked population declines in recent decades. This may reflect a shift from localised pressures to broader environmental and anthropogenic drivers.

Today, the relationship between people and seabirds in Scotland has largely transitioned from subsistence use to conservation management. Most harvesting has ended, although limited traditional practices (namely the guga hunt on Sula Sgeir) persist under licence. This shift reflects changing environmental conditions and societal priorities, with increasing emphasis placed on the protection and recovery of seabird populations.

The Guga Hunt on Sula Sgeir

The Guga Hunt is a long-established cultural practice associated with communities from Ness, at the northern tip of the Isle of Lewis in Scotland's Outer Hebrides. The hunting (or 'harvesting') of young gannets is widely understood to date back several centuries, and was described in 1549 (Munro, 1774). This represents one of the oldest continuously recorded examples of seabird harvesting in Scotland.

The hunt is traditionally undertaken annually in late summer. Each year, usually in August or September, a small group of men from Ness travels by boat to the remote island of Sula Sgeir, where they typically remain for a period of around two weeks (although in 2025, the Men of Ness confirmed that the hunt was planned to take place in a single day). During this time, they harvest young gannets prior to fledging. The practice is structured and follows established customs, reflecting knowledge and skills passed down through generations.

Harvesting methods remain largely traditional. Hunters typically use long poles fitted with a noose to capture chicks at the nest. Birds are killed, usually by a blow to the head, and processed on-site. The meat is prepared through gutting, singeing, plucking and salting for preservation before being transported back to Lewis. Participants reside in simple stone bothies during their stay on the island, reflecting the continuity of historical practices in a modern context.

Today, the hunt operates under a legal licensing framework. Under the Wildlife and Countryside Act (1981), seabirds are generally protected, but provisions allow for licences to be granted for specific purposes, including the taking of birds for food in relation to the gannets on Sula Sgeir. The Guga Hunt is permitted through such a licence, issued annually by NatureScot, which specifies the conditions of the harvest, including the number of birds that may be taken. A local NatureScot Area Officer counts the birds returned from Sula Sgeir on the party's return to Stornoway to ensure that the number of birds does not exceed licence conditions (Nature Scot, 2025, FOI request SIR181528/A5428114).

Despite several years where no licence was sought for the hunt, in part reportedly due to the communities concerns about the impact of HPAI on the gannet population, over 10,000 young gannets have been harvested from Sula Sgeir since 2016 (Nature Scot, 2025, FOI request SIR181475/A5428092 and Nature Scot, 2026, FOI request SIR183416/A5746098).

The licensing process has evolved over time and involves ongoing engagement between NatureScot and representatives of the Ness community. While the hunt remains culturally significant, its continuation is increasingly considered within a framework that seeks to balance the preservation of tradition with the conservation of internationally important seabird populations.

NatureScot licence assessment for the 2025 Guga Hunt

The decision to grant a licence for the 2025 guga hunt on Sula Sgeir was informed by population data and interim modelling of sustainable harvest levels. Following a 'Freedom of Information' request, the Scottish Seabird Centre was able to access documents, reports, and communications linked to this licencing decision (Nature Scot, 2026, FOI request SIR183416/A5746098).

Since the previous licence was issued in 2021, new information has become available, including the results of the 2024 gannet census showing the potential impacts of HPAI, which caused significant mortality across Scottish gannet colonies. This new data indicated that the Sula Sgeir gannet population has declined by approximately 17% since 2017 (12,271 AOS estimated in 2017 compared with 10,200 AOS estimated in 2024 - Table 1). Notably, Sula Sgeir is currently the only Scottish gannet SPA where the population has fallen below its citation level (that is, the population when the site was designated as a protected area).

In light of these changes, NatureScot undertook a Population Viability Analysis to assess the potential impacts of different harvest levels. This modelling considered a range of scenarios (the harvesting of 0, 500, 1000, 1500 and 2000 chicks annually) and evaluated predicted population change over both 5- and 25-year periods. The results indicated that higher harvest levels (1000 chicks and above) would likely lead to long-term population decline. A harvest level of 500 chicks was identified as the highest level at which the breeding population was predicted to remain broadly stable over a 25-year period, although there were indications that population growth would be suppressed.

Based on these findings, NatureScot recommended a harvest limit of 500 chicks for 2025. This figure was explicitly framed as a precautionary measure, intended to "allow the best opportunity for population recovery post-HPAI in the interim period until more robust population modelling is available." The assessment also emphasised that the modelling undertaken should be considered an interim approach, reflecting both time constraints and limitations in available data. In particular, the model did not incorporate factors such as immigration between colonies or the potential effects of episodic events such as disease outbreaks.

The 2025 decision therefore represents a shift from previous licensing approaches. Earlier assessments, based on pre-HPAI population data and modelling, had concluded that higher harvest levels (2,000 chicks annually) were likely to be sustainable. However, the availability of new census data and evidence of population decline prompted a reassessment, resulting in a substantially reduced harvest limit and indicating that previous assessments had not fully accounted for the potential impacts of disease outbreaks on the population.

NatureScot also recommended that more detailed population modelling be undertaken ahead of the 2026 breeding season to provide more robust evidence for future decisions. This reflects an acknowledgement that current advice is based on limited and evolving evidence, and that further analysis is required to fully understand the long-term implications of harvesting in the context of recent environmental change.

Other seabirds breeding on Sula Sgeir

In addition to the gannets, several other seabird species breed on Sula Sgeir, including Atlantic puffin (*Fratercula arctica*), kittiwake (*Rissa tridactyla*), common guillemot (*Uria aalge*), razorbill (*Alca torda*), great black-backed gull (*Larus marinus*) and European shag (*Gulosus aristotelis)*. For the most part these species will finish breeding and vacate the island by the time the hunt takes place.

However, there are three species aside from the gannets that may be significantly and negatively impacted by disturbance during the hunt. These are northern fulmars (*Fulmarus glacialis)* which are Amber listed, European storm petrels (*Hydrobates pelagicus*) which are Amber-Listed, and Leach's storm petrels (*Hydrobates leucorhous*) which are Red-Listed and a Schedule 1 species under The Wildlife and Countryside Act. We were able to access an 'Advice Request' from NatureScot Licencing (NatureScot, 2026, FOI request SIR183416/A5746098) detailing the expected impacts of disturbance on the breeding seabirds as a result of licencing the 2025 Guga Hunt.

More than 1000 fulmar nesting sites were recorded on Sula Sgeir during 2021 (Burnell *et al*. 2023). The fulmar colony on Sula Sgeir is currently assessed as being in 'unfavourable' condition and the licenced activities were expected by NatureScot to cause disturbance likely to displace chicks from nest sites, which may disrupt the adult's ability to feed those chicks. Human presence was expected to increase stress and defensive behaviours, and elevate the risk of nest abandonment, potentially reducing breeding success and chick survival. Disturbance was anticipated even where the recommended mitigation measures were followed.

European storm petrel and Leach's storm petrel were also thought to be vulnerable during the period when the hunt takes place, with breeding adults incubating eggs or provisioning chicks within nest sites located in rocky crevices, stone walls, and vegetation. Proposed activities may obstruct access to nests, increase stress, disrupt feeding frequency, and cause disorientation through artificial light exposure. These disturbances may result in nest abandonment, reduced feeding by parents, and chick mortality. Impacts of disturbance were expected for both species even with mitigation measures in place.

Not least, the wider gannet colony may experience increased stress and vigilance among adults and chicks, alongside temporary disruption of chick provisioning and potential nest abandonment, which may negatively affect reproductive success.

Impacts of disturbance on these species will vary depending on several factors, notably when the hunt takes place, how long humans are present on the island, and what mitigation measures are in place. However, the document provided by NatureScot clearly acknowledges that mitigation measures would not realistically prevent disturbance from taking place.

Discussion

The 2025 licensing decision relating to the Guga Hunt on Sula Sgeir reflects a clear shift in approach compared to previous years, incorporating new population data and recognising the impacts of recent mortality events. The reduction in the permitted harvest from 2,000 individuals in 2021 to 500 in 2025 demonstrates that NatureScot is responding to emerging evidence, particularly the effects of HPAI and updated census data indicating population decline at Sula Sgeir. However, the assessment also highlights several areas of uncertainty and limitation that are important to consider when evaluating the appropriateness of continuing the hunt.

A key issue lies in the reliance on interim population modelling. The Population Viability Analysis undertaken to inform the 2025 decision was conducted within a constrained timeframe and was explicitly acknowledged as a preliminary assessment. The model did not incorporate important ecological processes such as immigration between colonies, nor did it account for episodic or ongoing pressures such as disease. Given that HPAI has had significant and continuing impacts on Scottish gannet populations, the omission of such factors introduces uncertainty into predictions of long-term population stability. The report itself notes that more detailed modelling is required to provide a robust evidence base for future decisions.

However, it is significant that a previous, more detailed Population Viability Analysis (commissioned by NatureScot in 2016) found that on Sula Sgeir "the population has continued to grow and it seems probable that this would continue to be the case at the current harvest level (of 2,000 chicks per year) and at increased levels of harvest up to 3,500" (Trinder 2016). Despite the detail of this assessment, the population is currently lower than it was in 2013, suggesting that it may not be possible to fully account for the impacts of disease and that a more precautionary approach is required. Concerningly, the impacts of future outbreaks of

disease (so called 'one-off' events) were not considered in modelling when issuing a licence for the hunt in 2025.

Although the interim population modelling used to inform the 2025 licencing decision predicts that a harvest of 500 chicks may allow the breeding population to remain stable over a 25-year period, it also indicates that population growth would be suppressed and that recovery to previous population levels is unlikely within that timeframe. In the context of recent declines and broader and growing environmental pressures affecting seabirds, maintaining a suppressed or static population may not be sufficient to ensure long-term resilience. This is particularly relevant for a species such as the gannet, which has a slow reproductive rate and is therefore less able to recover quickly from population declines. Recent studies suggest that it may take almost two decades for some gannet colonies to recover after the devastating impacts of HPAI (Lane *et al.* 2026).

The assessment also highlights that Sula Sgeir is currently the only gannet SPA where the population has fallen below its citation level. This distinguishes the site from other colonies and suggests that it may be experiencing unique or compounded pressures. While the causes of this relative decline are not fully understood, the potential for additional mortality from harvesting to interact with these pressures warrants reconsideration.

It is of additional importance that, even before the impacts of HPAI on the colony, the percentage of population growth at Sula Sgeir (between its SPA citation in 2001 and the Seabirds Count in 2017) was significantly lower than the population growth recorded at other colonies designated as SPAs. NatureScot's licence assessment in 2025 acknowledges that "this indicates that the population growth rate has been supressed compared to other gannet populations outwith the influence of HPAI" (Nature Scot, 2026, FOI request SIR183416/A5746098).

Gannet colonies do not exist in isolation from each other. Trinder (2016) suggests that the Sula Sgeir gannet population is likely supported through recruitment from other colonies, indicating that "the removal of individuals from one colony would seem very likely to have effects on other connected colonies". Wanless *et al.* (2015) (B) hypothesise that Sula Sgeir may be a sink population supported by recruits from St Kilda and Sule Stack. Burnell *et al.* (2023) note that the historic harvesting levels of up to 2000 guga, along with the disturbance impacts caused during the harvest, likely accounted for 30% of annual production, and that population increases were on the island were "presumably as a result of immigration, probably from the neighbouring colonies in the St Kilda archipelago (Western Isles) and Sule Stack (Orkney), neither of which are increasing".

Crucially, the impacts of the Guga Hunt on Sula Sgeir will likely have knock-on population impacts at other Scottish colonies and it is essential that these wider impacts are carefully considered when making licencing decisions. Once again, the impacts of immigration were not considered when issuing a licence for the hunt in 2025.

The broader impacts of disturbance, and subsequently the breeding success, of other breeding seabird species on Sula Sgeir during the hunt should also be carefully assessed. It is likely that prolonged human presence on the island (for up to two weeks during the hunt), including the

associated noise, equipment, and use of artificial lighting, would have a negative impact on non-target species (other nesting seabirds). Although mitigation measures may be implemented, it is highly likely that the hunt would still cause prolonged disturbance, with potential adverse impacts for sensitive seabird species at their breeding site (Nature Scot, 2026, FOI request SIR183416/A5746098).

The species expected to be impacted by disturbance include Leach's Storm Petrel. Scotland is home to 100% of Britain's breeding Leach's storm petrels, a population which has decreased by 79% since the Seabird 2000 census (carried out 1998-2002) (Burnell *et al.* 2023, Seabirds Count). There may be a number of factors contributing to this decline and there are relatively few Leach's Petrels thought to be breeding on Sula Sgeir, but any additional pressures on such a highly protected and vulnerable species should be fully accounted for during decision making processes.

It seems clear that the disturbance impacts caused by the Guga Hunt on the breeding seabird populations of Sula Sgeir are very poorly understood. It is therefore of the upmost importance that reliable data is regularly collected and the distribution of seabird species on the island accurately mapped to provide an evidence base for decision making, ensuring that these unintended impacts are accounted for and recognised. Without this information, it is unclear how NatureScot can make an informed licencing decision.

More broadly, the licensing of this activity must be viewed within the wider context of cumulative and growing pressures on seabird populations. As outlined in earlier sections, seabirds in Scotland are experiencing sustained declines driven by a growing combination of pressures. In such a context, even relatively small additional sources of mortality - such as the removal of chicks through harvesting - may have disproportionate effects when combined with other pressures.

Taken together, these factors suggest that, while the 2025 licence represents a more cautious approach than in previous years, it remains based on incomplete evidence and carries a high degree of uncertainty that is difficult to reconcile with the current conservation status of seabirds in Scotland.

Recommendations

While recent modelling suggests that a reduced guga hunt may be compatible with short-term population stability at Sula Sgeir, this assessment is necessarily limited in scope and does not fully account for the broader and interacting pressures currently affecting seabirds.

In the context of:

- sustained long-term declines in seabird populations,
- ongoing and unpredictable impacts of disease,
- cumulative and growing pressures acting on seabirds and broader marine ecosystems,
- the slow reproductive and recovery rate of gannets, and

- the poorly understood disturbance impacts on other vulnerable seabird species,

the removal of individuals from the population, however limited, introduces additional risk to a system that is already under significant strain. Furthermore, the prolonged human presence associated with the hunt is likely to result in additional disturbance impacts to non-target seabird species breeding on the island, including highly vulnerable species such as Leach's storm petrel.

As such, this report considers that decisions should not be based solely on whether a given level of harvest can be modelled as sustainable in isolation. Rather, they should reflect the wider ecological context, the precautionary principle, and Scotland's responsibility for internationally important seabird populations.

On this basis, **we recommend that licensing of the guga hunt be permanently ended.**

This recommendation is made not in dismissal of the cultural significance of the practice, but in recognition that environmental conditions have changed fundamentally, and that long-term stewardship of seabird populations now requires a precautionary approach that minimises avoidable sources of mortality and disturbance.

Furthermore, substantially more robust evidence base needs to be established to support the conservation of seabirds on Sula Sgeir. At a minimum, this should include:

- comprehensive and regularly updated seabird population monitoring,
- detailed assessment of disturbance impacts on all breeding seabird species,
- improved population modelling incorporating immigration between colonies, disease impacts, and cumulative environmental pressures, and
- identification and mapping of the principal breeding and activity areas used by sensitive species, including Northern fulmar, European storm petrels, and Leach's storm petrels.

All survey, monitoring, and modelling data used to inform licensing decisions should be made publicly available in the interests of transparency and accountability. In the absence of such evidence, it is unclear how a licensing authority could demonstrate that any licensed activity would avoid adverse impacts on internationally important seabird populations and protected species.

The cultural importance of the Guga Hunt to the Ness community is fully recognised. Ending the practice would represent a significant change for a community with a deep connection to Sula Sgeir and its gannets. It is therefore essential that any transition is developed collaboratively.

We recommend that the Scottish Government:

- work in partnership with the Ness community,
- support and provide funding for initiatives that preserve and celebrate cultural heritage, and

- explore opportunities for community involvement in seabird conservation and monitoring on Sula Sgeir.

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