Falkirk Area & North Lanarkshire LBAP Taiga Bean Goose Action Plan

Anser fabalis

UK List of Priority Species:	No
Scottish Biodiversity List:	Yes
Birds of Conservation Concern (2015):	Amber

Introduction

Since the first version of this Action Plan was prepared, the status of the species formerly referred to as the bean goose *Anser fabalis* has changed somewhat radically, increasing the importance of effective protection and conservation measures to safeguard the wintering population associated with the Slamannan Plateau in Central Scotland.

Firstly, as of the 18 January 2018 the British Ornithologists' Union (BOU) announced that taiga bean goose *Anser fabilis* qualified as a full species in its own right. The BOU adheres to the classification of bird species adopted by the International Ornithological Congress (IOC). The IOC had determined that rather than the taiga bean goose, as it was previously, being considered as a sub-species of the bean goose, *Anser fabalis fabali*s, it was a full species and as such this approach was adopted in the UK.

Secondly, as a result of ongoing climate change, the only other wintering population in the UK,, that formerly associated with the Yare Valley in Norfolk, is virtually non-existent nowadays due to a phenomena known as 'short-stopping'. Winters are no longer sufficiently cold and hard to justify crossing the North Sea from the Low Countries to East Anglia; the birds opt to stay on the near continent throughout the winter.

Thus this action plan now relates to a species as opposed to a sub-species, and it involves what is now the only extant wintering population of that species in the British Isles.

Species Profile

As indicated, taiga bean goose *Anser fabalis* is now a full species in its own right, and therefore this section concentrates on taiga bean geese (rather than the other species within the bean goose complex).

These are all found in the Palaearctic ecozone, the natural zoogeographic region which includes Eurasia.
In the Western Palaearctic, (i.e., Europe, North Africa, northern and central parts of the Arabian Peninsula, and part of temperate Asia, roughly to the Ural Mountains) two species are found.

Bean geese breeds across northern Eurasia, from the highlands of Norway in the west to the Kamchatka Peninsula in the east, and at least five sub-species (or races) were formerly recognised.

The two commonly occurring species of bean geese in the Western Palaearctic are the taiga bean goose *Anser fabalis*, which is (as its name indicates) associated with the boreal forests of Scandinavia and Russia, (i.e., the taiga) and the tundra bean goose *Anser rossicus*, which is associated with the more open - tundra - habitats further north.

In western Europe, the taiga bean goose is much less numerous than the tundra bean goose.

During winter the wintering populations are not easily delimited, and the species can be intermingled.

However, at other times of year there is a reasonable degree of both morphological and ecological separation, which allows the species to be identified and differentiated in terms of, for example, breeding habitat requirements, as suggested, and in particular, the size and shape of the two species differs, with taiga bean geese being larger with longer necks and subtlety different head and bill shapes and bill colour patterns.

Numbers of tundra bean geese appear stable at *c.*600,000 birds.

However, those of taiga bean geese appear to be declining, *c.*100,000 individuals were estimated in the late 1990s, but only *c.*63,000 were estimated in the late 2000s.

The taiga bean goose breeds in the Kola Peninsula and taiga areas west as far as Finland, with a breeding range extending south into Norway and Sweden. Non-breeders begin moulting in June, with sub-adults undertaking a moult migration north away from the breeding areas, probably to northern Lapland or the White Sea coasts. The Fennoscandia breeding population moves south through southern Sweden to winter there, in Denmark, northern Germany and The Netherlands. Numbers decline in southern Sweden at times of hard weather, moving first to Denmark and then further south and west. Formerly, two flocks, totaling *c.*300-400 birds wintered in the UK, originating from the southern Swedish population, and occupied an important part of the traditional winter range of the species.

However, with the decline and virtual disappearance of the Yare Valley wintering population, the Slamannan Plateau wintering population, which currently amounts to some 240 birds, is particularly significant.

The taiga bean goose is a winter visitor to Britain, which spends the summer months on breeding grounds in Sweden. The Slamannan Plateau flock normally starts to arrive in late September with numbers increasing during October. The flock generally leaves the area by the last week of February.

The taiga bean goose is a large goose, with an average length of 72 – 90 cm. It is essentially dark in colour with a dark brown head and almost uniformly brown upper wing. The undertail is white and a white line extends along the top of the flanks. Its most striking feature is its legs, which are bright orange in the adult and duller orange in the juvenile. In addition to being hard to differentiate from the tundra bean goose, the taiga bean goose is easily confused with its close relative the pink-footed goose, which occurs in large numbers in central Scotland. However, its long bill with orange and black colouring distinguishes it from the pink-footed goose, which has pink legs and pink on the bill. The taiga bean goose has a cackling flight call, deeper than that of the pink-footed goose and quite different from the honking call of the greylag goose.

In the past there was evidence that many of the birds used to feed in cereal stubbles and

occasionally on potato fields on the winter quarters in the UK. However, on the Slamannan Plateau birds typically use semi-improved fields, although in recent years the main feeding sites have often been intensively managed pastures; the birds now show preference for improved pastures, which contain a high proportion of perennial ryegrass *Lolium perenne* and timothy *Phleum pratense*.

They prefer feeding fields unused by grazing livestock during the winter months. The main feeding sites are scattered throughout the Slamannan Plateau, although there are certain areas which are strongly favoured (though these do progressively change, partly with farming practice).

The birds are intolerant of disturbance, and choose mostly open areas with unobstructed sight lines both for feeding and for roosting. Preferred feeding areas are often places where the birds cannot be easily viewed from places readily accessible by people; the birds utilise the topography of the plateau to minimise any risk of disturbance.

Roosting formerly occurred on Loch Ellrig but subsequently it was largely concentrated on Fannyside Loch and pools on Fannyside Muir. However, in the past decade or so at least part of the flock has also used pools on Darnrig Moss. In some circumstances other sites are temporarily used, for instance areas of flooding adjacent to feeding areas. During periods of frost or snow the flock will often remain out in their feeding areas and may not return to the roost. Night feeding does occur during normal winter temperatures but has not been studied closely. In addition, areas of muir within the Plateau are occasionally used as refuges by loafing birds when disturbance is sufficient to cause them to desert nearby feeding areas.

The flock will normally fly at dawn to a selected feeding field where if undisturbed they will spend the day feeding, drinking and resting. If disturbed the birds will fly to another feeding site or, as described, if the disturbance is severe, to areas of muir where the birds feel safe loafing amongst the ericaceous vegetation in which they are best camouflaged. At dusk they return to their preferred roosting areas. It is at this time that they are most vocal.

Legal Status

Protected under the Wildlife and Countryside Act 1981. Included on Annex II/I of the EC Birds Directive and Appendix III of the Bern Convention. Whilst it is a quarry species in parts of its range, the taiga bean goose is not a quarry species in the UK.

Current Status

The taiga bean goose breeds in northern Eurasia from the highlands of Norway in the west to Kamchatka in the east. Bean geese were regarded as a common winter visitor to northern Britain and East Anglia during the first half of the 19th century, although the then sub-species or race involved was not noted. A widespread decline in numbers began in the 1860's and 1870's until in the early part of the 20th century only a few flocks remained. Until recently the only two regular wintering flocks in Britain have been those in the Yare Valley (Norfolk), and on the Slamannan Plateau – an area of around 3,600 ha divided between Falkirk and North Lanarkshire Council areas. This is now the only site in UK regularly visited by the birds.

The central Scotland flock numbered around 130 – 150 birds in the 1990s but it progressively increased at peaked at 300 birds in 2006/2007, whilst in recent winters the peak has been c.245.

Ringing results have suggested that the taiga bean geese wintering in England and Scotland breed in different parts of Scandinavia. The majority of the individuals visiting central Scotland probably

belong to a fully wild sub-population, which is clearly distinct from the one (formerly) wintering in Norfolk. A very small number central Scotland flock may have also derived from a re-introduction project, which started in 1974 in central Sweden. Despite being a small proportion of the total northwest European wintering population the British birds occupy an important part of the traditional range of the species.

Satellite tracking results indicate that the Scottish birds have a discreet staging area in northwest Denmark in the Blokhus/Pandrup area that they use from late February to March. For about two to three weeks they feed on rough wet grassland, improved pasture and some winter cereal crops, roosting on flooded wet grassland and sedge fields amongst reedbed areas before moving on in mid-March to agricultural areas north of Oslo, Norway mainly in the Akershus/Nikivegen areas. Here they make use of bogland areas when disturbed or for loafing during the day, with birds often roosting on sandbanks of the Glomma River nearby. Later they may stage briefly in late March at areas further north as at Braskeiderfoss before heading northeast into Dalarna County, Sweden and thebreeding and moulting areas in late March and early April. The autumn migration seems to be well underway by September and is largely a reverse of the spring route except that Denmark is largely bypassed with the birds heading straight to the UK from Norway. The flock counts made at the staging sites identified to date, suggest that there may still be as yet undiscovered sites used by a proportion of the birds wintering at Slamannan.

Current Factors Affecting the Species

From the more recent knowledge built up of the preference for the habitats of taiga bean geese the most likely threats are:

- Reduction in the area of improved grassland shown to be preferred by the taiga bean geese;
- Visitor pressure, recreational activity and primary industry operations in the vicinity of the main feeding areas resulting in disturbance to both feeding and roosting areas;
- Other developments which may increase the potential for disturbance;
- Increase in wind turbine, and wind farm, developments; and,
- Livestock pressure.

Current Action and Opportunities

Since the late 1980s individuals such as John Simpson and Angus Maciver have produced annual reports detailing the findings of ongoing taiga bean goose monitoring work. These annual reports continue to be produced. Funding in recent years has been from North Lanarkshire Council, Falkirk Council and RSPB.. For some years, SNH (now NatureScot) also funded monitoring work in relation to their obligation in terms of the Slamannan Plateau Site of Special Scientific Interest (SSSI) / Special Protection Area (SPA).

In recognition of the importance of the Slamannan Plateau for wintering taiga bean geese a group was established in 1994 representing conservation interests in the area. The broad aim of the Bean Goose Action Group (BGAG) is to help conserve the population of taiga bean geese wintering in Central Scotland. The group seeks to minimise potential land use conflicts in the Slamannan Plateau area. For example, the group meets regularly and discusses current planning issues (such as wind energy development proposals) in the context of potential impacts on the taiga bean geese.

The group now includes representatives from NatureScot (NS), Royal Society for the Protection of Birds (RSPB), , Forestry and Land Scotland, SAC Consulting and Falkirk and North Lanarkshire Councils. In addition, the group calls on the specialist input of people such as Carl Mitchell and Larry Griffin formerly of the Wildfowl & Wetlands Trust (WWT) as necessary.

The RSPB acquired the land at Fannyside Mill adjacent to East Fannyside Loch, in 1996 and now manages the land in ways aimed at maintaining suitable habitat for the geese. In March 2006 part of the Slamannan Plateau was notified as a SSSI for taiga bean geese, In October 2008 this same area was also recognised as being of international importance and classified as a SPA for taiga bean geese. Unusually within the UK SPA network, this classification includes feeding area which are improved pastures as well as the roost site. These designations ensure that the areas involved are protected from adverse development.

Further information on these designations is available at the NS interactive Site Link website, SiteLink@nature.scot

In an attempt to understand the population dynamics of this small and vulnerable flock an increased effort has been made since October 2011 to catch, mark and track the taiga bean geese, with 33 having been caught and individually marked since then. Eleven of these have been marked with telemetry devices attached to neck collars – most recently GPS-UHF or GPS-GSM devices. The tracking and ringing has provided a wealth of new data allowing the group to assess survival, individual reproductive success and the route of the international flyway and the previously unknown staging, breeding and moulting sites used by the birds. This work has also stimulated international cooperation and possible research and monitoring opportunities.

A Bean Geese in Scotland website has been established to raise awareness of taiga bean geese and promote responsible watching of the geese on the Slamannan Plateau.

Communication and Awareness

The special importance of the Central Scotland taiga bean goose flock has created widespread interest both locally and nationally. This interest impacts locally and can create potential problems both in the management of the area for the taiga bean geese and for those living and working the area. A delicate balance exists to satisfy the needs of those with an interest in the taiga bean geese whilst being sympathetic to the requirement of the birds. It is recognised that the continuing success in maintaining the flock in the area is dependent on the help and co-operation of those involved in seeking to see that the requirements of the flock are met, and especially local farmers who make considerable efforts to manage grass on which the flock depends. Communication and liaison with local people is seen as a vital step in maintaining the continuous presence of the flock. It is also recognised that local people have a valuable contribution to make in developing a future strategy in relation to the management of the area for the birds particularly in relation to communication and publicity.

From 2010 the Bean Goose Action Group has initiated annual projects at Greengairs, and Slamannan Primary Schools to raise awareness of the taiga bean geese while contributing to pupils education through science, art and communications. This has been very successful, and is something the group and the schools both wish to continue.

Objectives and Targets

Objective 1
To protect and maintain the population of taiga bean geese wintering in Central Scotland by the identification maintenance, enhancement and protection of habitats used by the taiga bean geese for feeding roosting and loafing purposes.

Target 1.1
Maintain and, where possible, increase the area and quality of habitat favoured by the geese for feeding, loafing and roosting. (ongoing).

Target 1.2
Manage the Fannyside Reserve for taiga bean geese (ongoing).

Target 1.3
Minimise disturbance of the taiga bean goose flock caused by recreational use of the area (ongoing).

Target 1.4
Ensure windturbines and wind farms do not pose a threat to populations of taiga bean geese.

Objective 2
Minimise potential conflicts between land use and taiga bean geese in the Slamannan Plateau area by ensuring that planners and other decision makers are fully aware of the importance of the site and the requirements of taiga bean geese.

Target 2.1
Review of Supplementary Planning Guidance 2016 to be updated for use by planners.

Target 2.2
BGAG to continue to liaise with planners and decision makers.

Objective 3
Further the knowledge of taiga bean goose requirements and behaviour, in particular investigating local movements and behaviour of individual birds and the migration route to Scandinavia (ongoing) building on the successful use of GPS trackers to increase our knowledge on this subject.

Target 3.1
Continue annual monitoring of bird numbers and areas preferred for grazing loafing and roosting (ongoing).

Target 3.2
Assess the feasibility of catching birds on the Swedish breeding and moulting areas identified through the tracking work conducted to date then if possible, tracking them to see if they all return to Scotland or other European wintering areas.

Target 3.3
Achieve a better understanding of roosting and nighttime movements of the flock by using night vision equipment and camera traps to monitor known sites.

Target 3.4

Develop a strategy for the management of the data collected through this work, considering aspects such as data sharing, methods of recording, and provision of data to key groups.

Objective 4
Raise awareness of the taiga bean goose flock to increase local awareness and appreciation of the value and needs of the Slamannan Plateau taiga bean geese.

Target 4.1
Work with local schools to inform and engage the local community in this special species.

Target 4.2
Invite selected individuals on a visit to see the taiga bean goose flock (annually).

Target 4.3
Maintain information on a dedicated Bean Goose website with links to Partners web sites.

ACTIONS

ACTION	Potential Deliverers		Year to be completed or in place						Meets objective
	Lead	Partners	2022	2023	2024	2025	2026	2027	
A. Policy and Legislation									
1.1 Ensure that this habitat is afforded adequate consideration and, where possible, protected from damaging development through the planning process by: a) Developing appropriate policies within local and structure plans and other strategies as they are written or reviewed. (Ongoing)	Falk C (DS) N Lan C		*	*	*	*	*	*	1,2
1.2 Ensure that this habitat is afforded adequate consideration and, where possible, protected from damaging development through the planning process by: b) Review of supplementary planning guidance. 2023 (NLC only).	Falk C (DS) N Lan C		*	*					1,2
1.3 Influence Scottish Rural Development Programme development to ensure that Rural Priorities contains suitable packages and options for the management of taiga bean geese.	RPID	NS, FCS	*	*	*	*	*	*	1
1.4 Ensure that the development of countryside access does not cause disturbance to sites known to be favoured by taiga bean geese.	BGAG	Falk (DS) N Lan (DS)	*	*	*	*	*	*	1,2
B. Site Safeguard and Management									
2.1 Manage Fannyside Reserve in a way that encourages use by taiga bean geese.	RSPB	BGAG SAC	*	*	*	*	*	*	1
2.2 Identify areas in the Slamannan Plateau, which may be suitable for restoration and management to benefit the taiga bean Goose flock.	BGAG	NS RSPB Falkirk (DS) North Lan (DS)	*	*	*	*			

ACTION	Potential Deliverers		Year to be completed or in place						Meets objective
	Lead	Partners	2022	2023	2024	2025	2026	2027	
C. Species Management and Protection									
3.1 Promote the Scottish Rural Development Programme Rural Priorities packages and option which are beneficial to taiga bean geese.	SEARS	BGAG	*	*	*	*	*	*	2
D. Advisory									
4.1 Make available woodland guidelines to applicants for forestry grants and to others involved in tree planting on the Slamannan Plateau.	FC	FCS	*	*	*	*	*	*	2
4.2 Distribute the information leaflet highlighting the taiga bean goose, its habitat requirements and appropriate action to benefit the taiga bean geese, to all landowners and occupiers.	BGAG	BGAG			*	*	*	*	1,4
E. Research and Monitoring									
5.1 Monitor annually species numbers and fields used for feeding and roosting and produce an annual report. (*see action E2*)	AM	RSPB NS Falk C N Lan C	*	*	*	*	*	*	1,2,3
5.2 Continue to update GIS map of key taiga bean goose feeding and roosting fields based on data from action E1. To be maintained, and managed at one location and disseminated from there.	NS		*	*	*	*	*	*	1,2,3
5.3 Conduct further research into the local movements, behaviour, survival and reproductive success of individual birds in the central Scotland flock by fitting neck collars.	BGAG	NS AM	*	*	*				3
5.4 Use tracking to identify other staging areas locally and track birds from Dalarna, Sweden to see if they only come to Slamannan. Also tracking indentifies new feeding and roosting areas in Slamannan more efficiently than observation alone. This will help inform Planning and conservation management decisions.	BGAG		*	*	*				3

5.5 Use camera traps and / or tagging data to monitor roosting and night time movement of taiga bean goose flock.	RSPB	BGAG	*	*	*				

ACTION	Potential Deliverers		Year to be completed or in place						Meets objective
	Lead	Partners	2022	2023	2024	2025	2026	2027	
5.6 Review existing research in the UK and elsewhere on taiga bean geese and identify the need for future research to be carried out.	BGAG		*	*					3
5.7 Ensure that the work BGAG have carried out is made available and contributes to research in the UK, and Europe.	BGAG		*	*	*	*	*	*	
5.8 Develop contacts with universities, research units and other organisations/individuals with an interest in taiga bean geese.	BGAG		*	*	*	*	*	*	3
F. Communication and Awareness Raising									
6.1 Maintain, develop and manage the taiga									
6.3 Develop links with local groups and schools in the taiga bean goose study area to raise awareness and understanding of the importance of taiga bean geese in the area.	BGAG		*	*	*	*	*	*	4

ACTION	Potential Deliverers		Year to be completed or in place						Meets objective
	Lead	Partners	2022	2023	2024	2025	2026	2027	
G. Plan Monitoring and Review									

7.1 Monitor the implementation of actions in this plan annually.	BGAG	All partners	*	*	*	*	*	*	All
7.2 Monitor the completion and effectiveness of the actions in detail and review this plan every 5 years to ensure continued effectiveness.	BGAG	All Partners					*	*	All

Abbreviations

AM - Angus Maciver
BGAG - Bean Goose Action Group
CSGT - Central Scotland Green Network
EARAG - Education & Awareness Raising Action Group
Falk C (DS) - Falkirk Council Development Services
FC - Forestry Commission
WWT - Wildfowl & Wetlands Trust
JS - John Simpson
N Lan C - North Lanarkshire Council
RSPB - Royal Society for the Protection of Birds
SAC - Scottish Agricultural College
RPID - Rural Payments and Inspections Division
NS - NatureScot

Key Contacts

Angus Maciver	Local Ornithologist

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In addition, unpublished reports detailing the early work on the taiga bean geese undertaken by John Simpson, (Simpson, 1993, 1992, 1991 and 1990) were prepared, and the Central Region or Forth Bird Reports published in the journal of the Forth Naturalist and Historian, which are available online at http://www.fnh.natsci.stir.ac.uk, include details of early records of taiga bean geese.

Websites

http://beangoose.blogspot.co.uk/ - the blog of Angus Maciver, the Bean Goose Monitoring Officer
http://scotlandsbeangeese.wikispaces.com/ - a website dedicated to the Slamannan Plateau Taiga Bean Geese (where, for instance, many of the reports detailed above can be found).
http://www.birdlife.org/datazone/speciesfactsheet.php?id=375 - the Bean Goose factsheet on the Birdlife International website

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