

**GREAT
BUSTARD
GROUP**



Patron: His Majesty King Charles III

Annual Population and Breeding Report 2025



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A nest in grassland on Salisbury Plain. Nests in grass are not a common occurrence as most are in cultivated crops, either silage or cereals.



A female feeding her large chick

1) Summary

2025 breeding

31 females – including those too young to likely rear chicks*

38 nests found – this figure includes replacement clutches.

21 nests found inside the reserve

17 in wider landscape

10 clutches taken for headstarting

28 nests left in situ

16 clutches resulted in confirmed chicks of which a minimum of 4 survive.

Productivity represents 0.13 surviving chicks per female.

*Females under 4 years are considered unlikely to recruit a chick although they may nest from 2 years onwards. The number of females truly eligible for inclusion in recruitment calculations will be lower than 31, but the error will be small and the figures used represent a realistic minimum rate of recruitment.

Totals

Location	Clutches	Clutches Collected	Clutches in situ	Clutches failing to hatch	Unknown hatching outcome	Clutches +1 hatching	Known chick mortality	Died unknown	Chicks surviving
In Reserve	21	5	16	1	7	8	2*	4	2
Outside Reserve	17	5	12	4	0	8	3**	3***	2
Total	38	10	28	5	7	16	5	7	4

*one infanticide and one collision with livestock fence

** Evidence of predation by Fox

*** Over a period of 2 weeks the number of foxes observed in the field 2 of the chicks were seen in frequently went up significantly, during this time the chicks could not be located with the drone or trail cameras and were subsequently not seen again.

The productivity inside reserve per nest is 13% and productivity outside reserve per nest is 17%. The likely

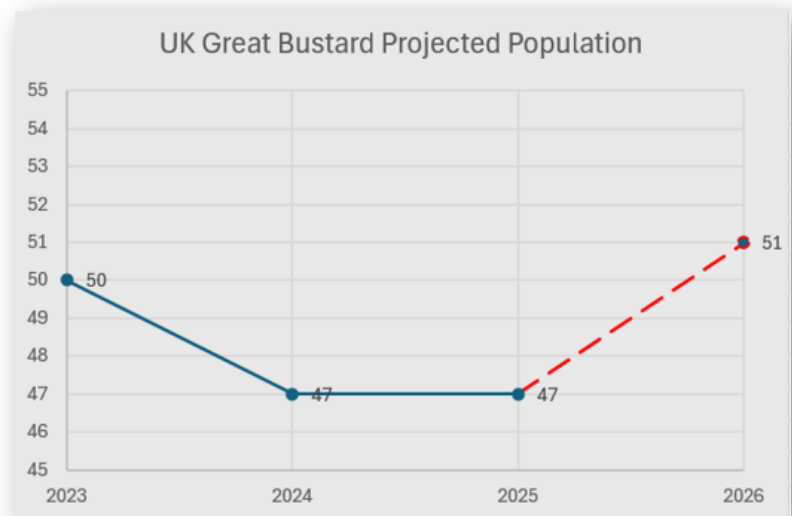
explanation is the high nest density inside the reserve is the cause of the lower productivity and this more than off sets the absence of the two large ground predators – Fox and Badger.

Population Change

During 2025 the UK Great Bustard population increased. Both parent reared chicks and head started chick contributed to this growth. Using the minimum population figures, rather than a population estimate, a December to December increase of 5 birds (minimum) represents a population increase of 9%. One mature male (18 years), who was frequently identified by a wing tag, is believed to have died either during or shortly after the lek. He had been frequently seen before the lek, and his absence noticed in September when he did not arrive at his usual winter foraging area. Regular communication with local farmers during the spring mowing period, together with autumn census data, indicated no fluctuation in the number of mature females. The use of drone surveys to monitor nesting areas throughout the spring and summer months appears to have been effective, with no losses of adult females recorded during the breeding season.

Projected population growth in 2025/26.

Based on 1 mature male bird dying and 5 juvenile birds surviving the Winter, this would represent a population increase of 9%.



Projected growth on minimum figures



2) Monitoring Methods

Sightings by GBG staff using binoculars and telescopes make up the greatest number of observation records. Reports from farm staff and others are fewer in number but also very useful.

The GBG has two Mavic Three drones fitted with visual spectrum and thermal imaging cameras. Incubating Great Bustards have a weak thermal signature – considerably weaker than the much smaller Red Legged Partridge, for example. To allow the thermal imager to detect an incubating Great Bustard the ambient temperature must be low, and in practice this means conducting surveys early in the morning. In fine weather with bright sunshine the solar energy heats up the surrounding area and the thermal contrast ceases to be discernible. The requirement for dawn surveys brings an extra pressure on the drone team. The volunteers are a wonderful and dedicated bunch but are generally over retirement age and have a limited capacity for maintaining enthusiasm for 4am starts. In practice this results in a tail off in available staff after the primary aim of protecting females from death by mowing in silage crops has been achieved.



An early morning drone sortie over a known nesting area

Post hatching, the females are easier to locate as the search area is known and the females with chicks will move in areas of open vegetation. This lends itself to monitoring later in the day, although drone activities in and around the MoD estate are often required to be undertaken before the usual working day starts in order to secure range clearance permission. 2025 is the first-year monitoring with the drones has been extended beyond the scope and season of nesting females in silage crops. The results are very useful and informative, and the technique will be repeated and expanded upon in 2026 and beyond.



Trail cameras deployed on areas the birds were frequently seen to forage helped with aging chicks and identifying individuals.

12 trail cameras were deployed by the end of the season. We found a greater number of basic cameras gave better results than a smaller number of more expensive higher specification cameras. The cameras provided evidence of the presence of chicks and also of female identity though leg ring identification. The images of chicks also gave opportunity to approximately age and then when older, sex the chicks. The trail cameras also give evidence of Fox presence and frequency.



Trail cameras have given excellent results

A photo guide to aging chicks has been constructed to assist with aging chicks in the field. The images come from headstarted chicks of known ages.



Drones have been used to find and monitor females with chicks

GBG has now two thermal nest data loggers but it was not possible to deploy them this year as they arrived after the last eggs hatched. A local licenced bird ringer is on standby to get the loggers deployed at the earliest opportunity in 2026.



3) Population and Distribution



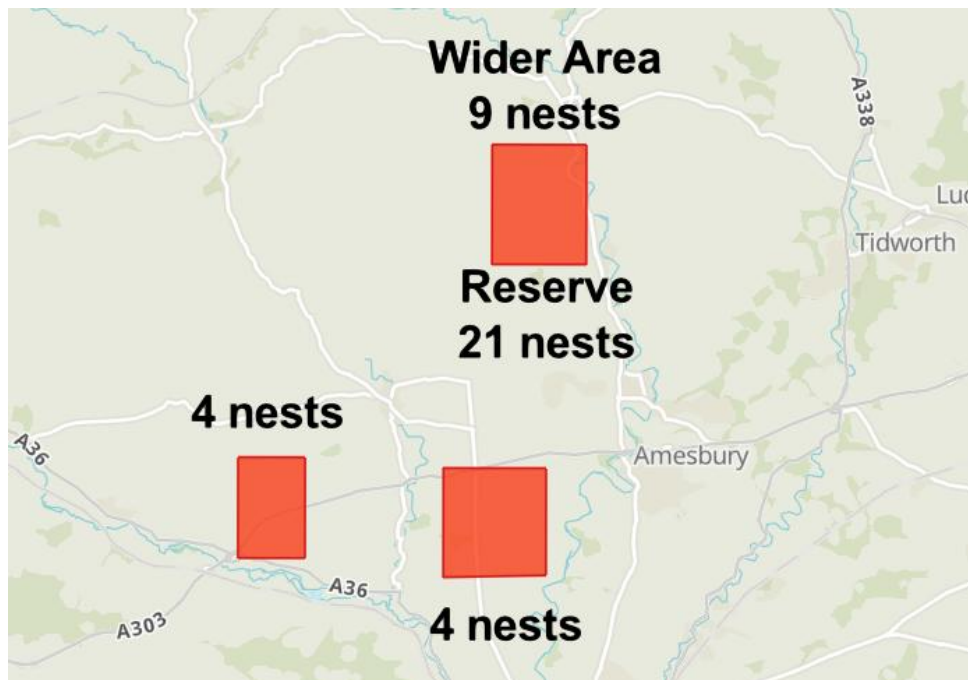
Sightings occurred over a vast swathes of Wiltshire.



Every sighting is logged and recorded on ArcGIS enabling us to easily see which areas the birds frequently spend time in.

4) Nesting

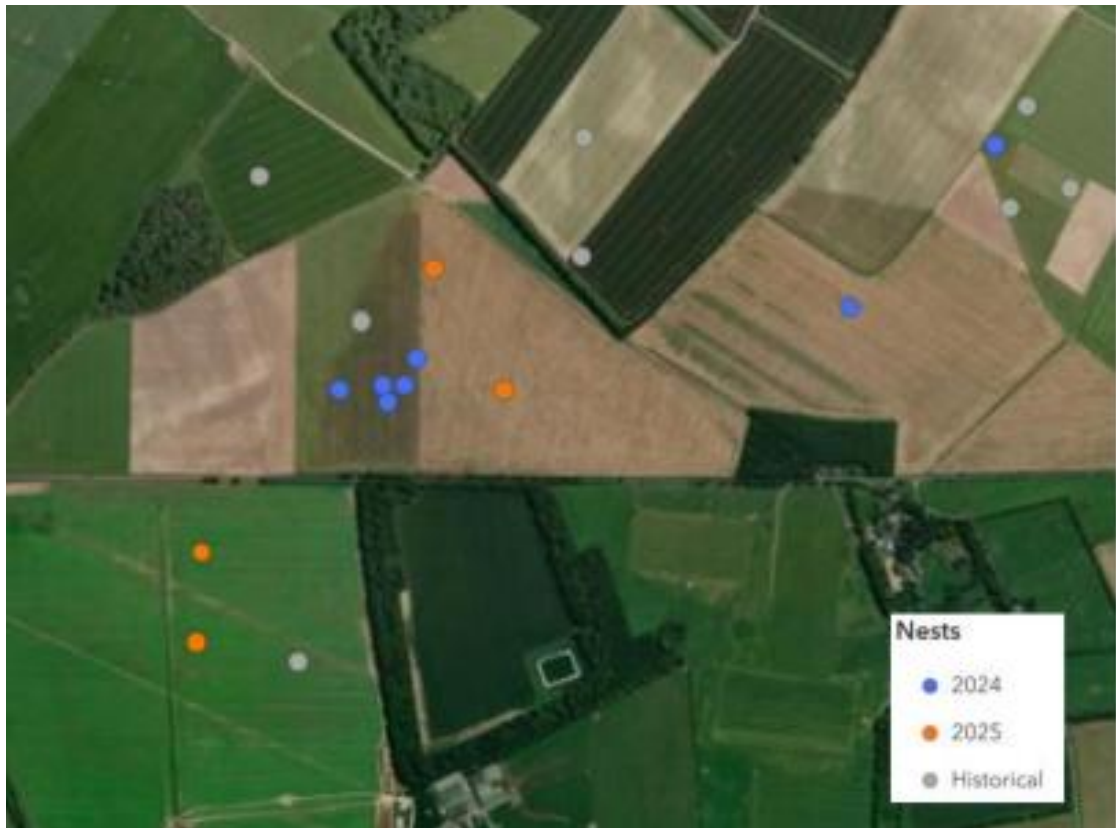
Nest locations and habitat



Map showing broad distribution of nests



This is the first time Bustard nests have been located within the Cranborne Chase National Landscape.



Southern area nesting



Detail of Reserve Nesting Area, there was also a very clear expansion of nests outside of the reserve in 2024.

Nests in Crop Type

Habitat	Nests	Close to Conservation Plot	Total in situ	Hatch rate in situ	Chick Survival
Grass Mosaic	19	19	14	64%	21%
Spring Barley	1	1	1	100%	0%

Cover Crop	2	0	2	50%	0%
Maize	2	2	2	100%	0%
Sanfoin	2	0	0	-	-
Mature grassland	3	1		66%	0%
Grass	1	0	1	0	-
Spring Wheat	2	2	2	100%	50%
Grass and Clover	3	0	0	-	-
Oats	3	0	2	0%	0%
	38	25	24	Av 80%	10%

Observations on nest locations

The monitoring results suggest a pattern of nest location being selected close to, but not necessarily in or adjacent to, suitable foraging areas for chicks. The nests inside the reserve were all close to open, weedy and herb rich areas, as the reserve is managed to provide a mosaic of cover and foraging areas. Away from the reserve nests were observed and others surmised as being close to good foraging areas but the nests themselves were in thicker, and often sterile arable crops.



The arrows mark the location of nests

Two nests in mature grassland were close to Stone Curlew plots, one nest in non-organic spring barley was with 50 metres of a Stone Curlew plot. Two nests in non-organic spring barley were within 50 metres of a Lucerne block provided by GBG. Another two nests were in a non-organic maize crop but close to a grass conservation plot. Observation of females foraging with chicks show the preferred feeding areas are the edges

of plots. It is not clear if this is due to the open vegetive structure or the proximity of cover. Observations of females feeding on the edge of the Lucerne plot, where the vegetation is thick, suggests the former, but both factors are considered likely to be relevant.

Observations from drone sorties and from trail cameras show the females roosting and resting in the cover of the arable crop but leading the chicks to the foraging areas several times a day, before returning to the dense cover of the surrounding crop to roost. Spending the hours of darkness in a sterile monoculture with very low biodiversity, but good cover, may well be a predator avoidance technique.



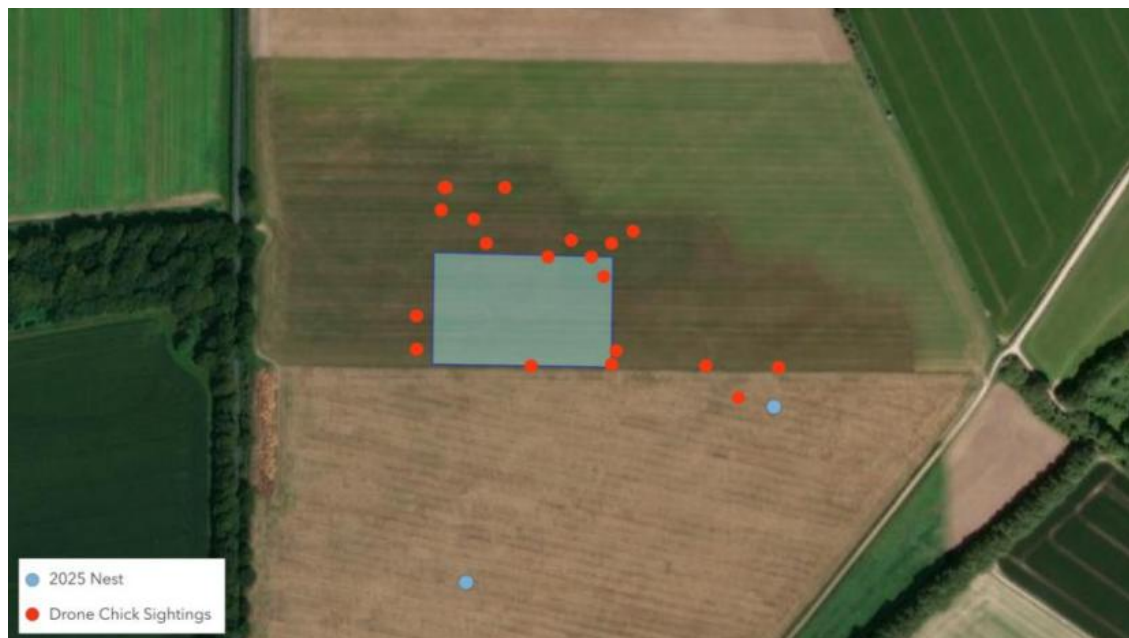
The Maize will provide little or no food for this chick, but it does provide excellent cover from predators



Mapping showing the block of Lucerne GBG provides and nesting patterns.



Nesting this year around the Lucerne Block



Chick movements around the Lucerne block

In a typical year cereal harvesting would take place after the chicks have developed the ability to fly properly, and the harvest itself may represent low risk to the chicks. 2025 saw a warm dry summer and this resulted in the earliest ever cereal harvests on some farms in Wiltshire. Using the drone, and by working with the farmers successful coordination of the harvest made it possible to ensure chick safety within the lucerne block provided by GBG. Of note, a similar practice to this has also been carried out by the Germans with their Great Bustards, however they use 50m wide strips rather than square blocks, and this does not give enough cover for the chick and they will either run straight through the strip into the crop the other side which still needs to be harvested, or the chicks are predated within a few days of harvest.

5) Incubation and Egg Mortality

All recovered eggs were examined post mortem.

Clutches fail to hatch 5

1 abandoned due agri disturbance

3 abandoned unknown

1 infertile

This year the data shows loss of eggs to predators is low, and that it may not be a matter of concern. Of 28 nests left in situ, none suffered the loss of eggs by predation. Of the five failures one was abandoned after a communication breakdown with the farm caused a very small unmown area to be left around a nest. The female was safe, but the area left too small for her to continue incubation.

One nest had infertile eggs and three were abandoned for unknown reasons.



An abandoned clutch – no reason was known for the abandonment.



Both eggs were examined and found to be one male and one female, but at point of hatch.

6) Chick Mortality

Total of known fatalities

1 infanticide
1 collision
3 believed fox
7 unknown



Series of photographs from a trail camera showing a female agitated and protecting her chick from an unseen threat

Infanticide

There was one known case of infanticide in 2025. Infanticide has been witnessed inside the reserve several times in recent years. One female involved is identifiable by being a slightly darker colour than is typical. It is not clear if this female is the only individual responsible for infanticide, but she is certainly responsible for some of the deaths over three years. This female is not ringed or otherwise marked.

No further infanticide was witnessed, but it is appropriate to note after the removal of 5 clutches, the nesting density was significantly lowered.

Infanticide has never been observed outside the reserve, and perhaps more relevantly, aggressive behaviour between nesting or brooding females has never been observed outside the reserve.

Collision

There was one known case of fatal collision in 2025. A female which nested successfully inside the reserve was observed flying back and forth over the valley with her chick. She would sometimes fly before the chick, alight in a visible place and call her chick, apparently encouraging it to fly to her. This was repeated over several hours when the chick was observed to turn in the air, loose height, and then seemingly change its mind about landing and it struck a barbed wire livestock fence. The chick was badly injured and impaled on the fence. After swift veterinary examination, terminal injuries were identified and the chick was euthanased.

The fence involved forms a barrier between a byway and a field used for holding livestock and removal of the fence is not a practical option. Marking the top wire may be a suitable compromise action.

Predation

There were three incidents where the loss of chicks was strongly suspected to have been due to predation by Foxes. The act of predation was not witnessed in any of the cases. Chicks over 6 weeks old were noted to have disappeared, and the event coincided with the appearance of Foxes on trail cameras and during drone surveillance.

Aerial predation was not observed. Red Kites are an almost continual daytime presence over the nesting areas. The Kites will repeatedly stoop at females with chicks, but no predation has been observed. There may be a detrimental effect from the Kites' attentions as time spent defending chicks from aerial attack may otherwise be spent feeding or resting, but the magnitude of this is unknown.



Female and chick foraging within the reserve.



A female and chick in open ground. This chick was probably predated by a Fox

7) Headstarting

10 clutches were rescued or taken for headstarting. All were in vulnerable locations and did not represent a realistic chance of natural success. The eggs were taken to the Cotswold Wildlife Park for the completion of incubation. 21 chicks were hatched and reared at the GBG facility on Salisbury Plain.

An ulcerative enteritis outbreak caused several deaths and left some survivors in a weakened condition. The exact cause was unable to be determined but given the pattern of disease; age of birds and other findings it is presumed that the primary cause was viral with secondary bacterial overgrowth and septicaemia. 11 birds were taken to the release aviary on Salisbury Plain. One male suffered a broken toe and after treatment was considered unfit for release and was taken to Wataunga Nature Reserve, a zoo in Norfolk which holds the Great Bustards which cannot be released.

Of the 10 birds release there were 7 males and 3 females.



The techniques used for rearing and releasing the birds were altered from previous practices following a visit to the Great Bustard project in Germany. Here staff from the Brandenburg Office for Bird Protection and from the Forderverein Gross Trappen Schutz instructed and demonstrated the techniques they had developed which were giving very impressive results.



Visiting the chick rearing facilities in Germany

In summary the technique involves a small team of staff spending a lot of time with the chicks from day one. A distinctive green suit of “scrubs” is worn, being practical and comfortable but still significantly different from a normally attired person. Time is spent with the chicks encouraging them to walk or run as much as possible and to encourage foraging behaviours.



The change to scrubs is much more practical than the heavy suits worn in previous year.

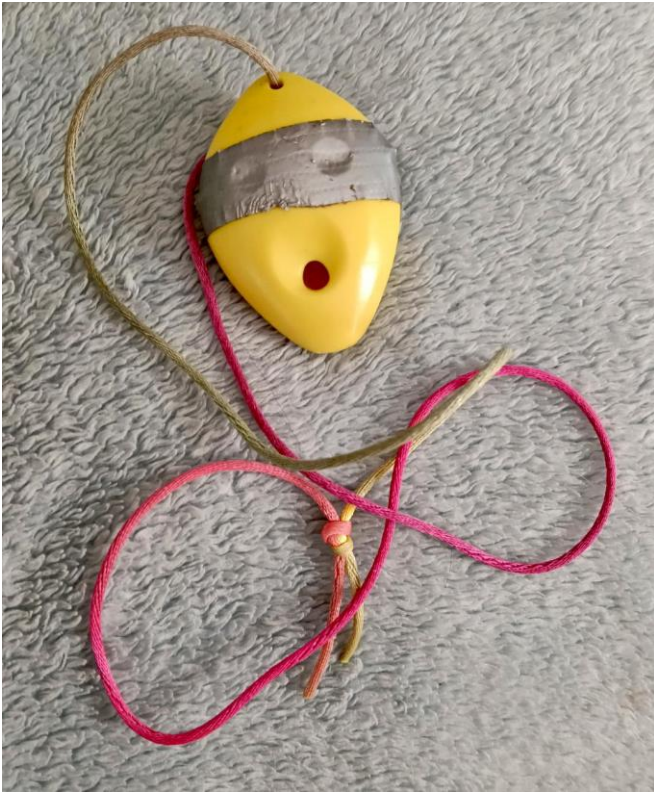


As soon as the chicks have grown proper feathers and can thermo-regulate, they are taken to the release aviary.

Each day the chicks are taken out of the aviary, and they follow the rearing staff. The process starts with short walks of 10 minutes or so and build up to longer trips of several hours and much greater distances. The young birds fly regularly, usually circling around and landing back close to the take off point. They have a strong attachment to each other as well as to the rearing staff and tend to stay in a group.

When individuals fly and become separated, they usually walk back to the group but on occasion a member of the rearing team would walk towards them and find them. The bird in question would then follow the person back to the aviary.

By September the birds became less enthusiastic to return to the aviary and their behaviour changed quite quickly at the end of the month when they simply preferred to stay out. By this time the birds were fit, well-practiced in flying and had been spending several hours each day foraging and feeding themselves. They had then in effect, completed the release process themselves.



One additional measure we took to add to the process was to try and standardise the vocalisation between the rearing staff and the chicks. Small chicks respond positively to a musical hum, or chirp. As they grow, they use a higher pitched and less musical cry. Acknowledging the different voices within the chick rearing team we used small Ocarinas to mimic the calls used by the birds. Taping over the various apertures as the tone of the call changed kept the sound consistent and easy to reproduce. When a lone bird had left the group and a member of the rearing staff walked over towards it, the first conformation of having located the birds in long vegetation often came from a reply to a call from the Ocarina.



Feeding the birds away from the aviary



The birds take flight but tend to keep together

The issue of attaching tracking devices to Great Bustards is a matter under regular consideration. In the experience of the GBG body harnesses are not suitable for attachment to young birds. A young male at the time of release may be 4 months old and weigh 4-6 kilograms. We know by 18 months males can weigh over 14 ½ kilograms. We have not seen a harness which can accommodate the range in body size such weight gain represents.

The answer appears to be to use necklace mounted transmitters and to restrict their use to females only. The males have much thicker necks and need to expand them further when they inflate their gular pouch during the display.

Again, drawing upon the experience and advice of our German colleagues we use a necklace mounted Ornitela 10 gram device.



The Ornitela Ornitrack 10 device



The transmitter fitted to a female

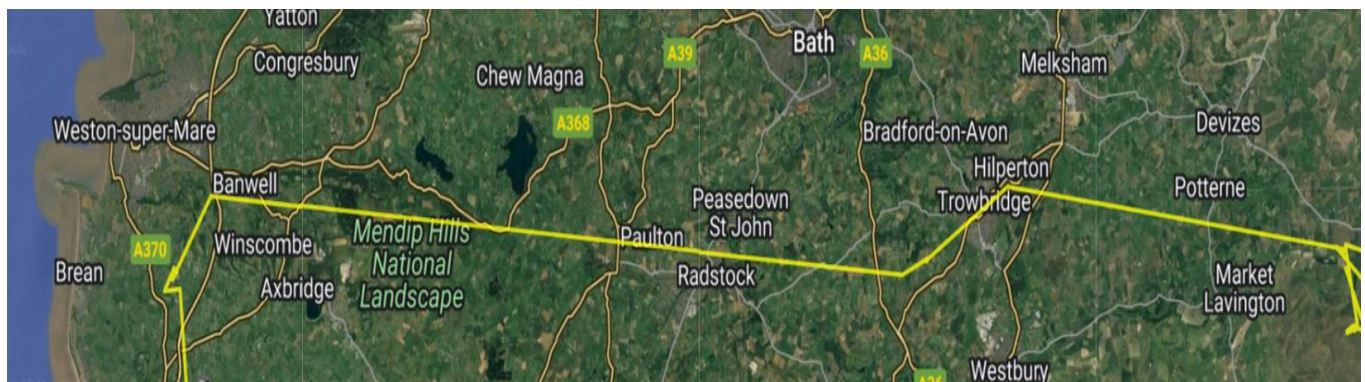
The satellite tracking units are configured remotely and offer a wide range of programmable options. These range from very high resolution monitoring, such as recording a GPS position every second with data transmissions every ten minutes, to much lower frequency settings, for example a single GPS fix every 48 hours with data transmitted every 27 days.

Through a process of trial and refinement, we have identified an optimal configuration in which data are received twice daily. The first transmission at 07:30 allows confirmation that the bird has survived the night without predation, while the second at 19:30 is timed to coincide with the bird settling at its evening roost and viewing her daily activities. This approach provides effective monitoring while balancing battery performance and long term tracker reliability.

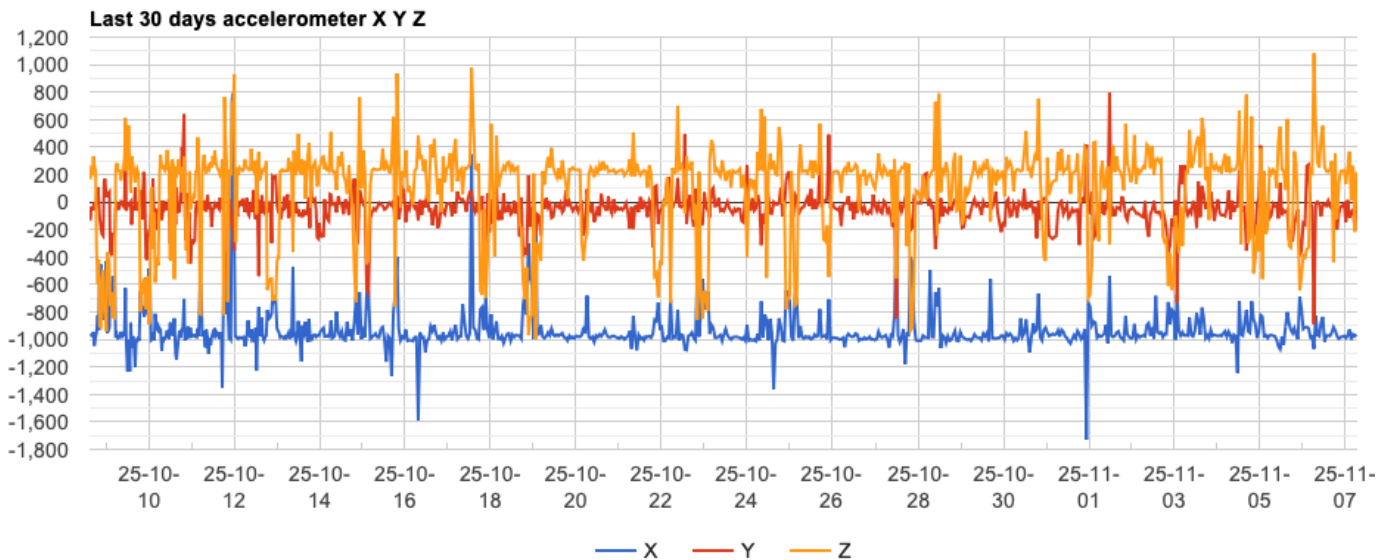


When viewing the tracking of a bird over a period of time, patterns of behaviour become more evident, roosting in shorter vegetation, then flying to an area that is better for foraging during the day.

Following release, the headstarted birds were frequently observed associating in pairs and remained within a few miles of the release site. By mid November, a period of wider dispersal had begun. Evidence from both reported field sightings and satellite tracking data indicates that the birds had largely separated at this stage and moved independently into the surrounding landscape.



With GPS points taken every 30 minutes the tracks can look very angular and straight, in reality they may well deviate from these straight lines considerably.



An accelerometer trace allows us to monitor the birds movements and in combination with the temperature data that is also sent helps us to detect any changes the birds habits or health.

Of the three headstarted females fitted with satellite trackers, one unit generated an alert shortly after release indicating that the bird had ceased moving in close proximity to the release site. Analysis of the accelerometer data showed that the tracker had remained for several hours in an orientation consistent with the bird lying on its back. A member of the chick rearing team was able to respond rapidly, attend the location indicated by the tracker, and recover the device. The evidence strongly suggests that this female was predated by a fox.

A second tracked female spent several weeks ranging widely across Wiltshire. During this period, she occupied a large field of turnips for an extended time; the field also contained electricity pylons, which she had previously navigated successfully in other locations. Following a routine morning check in, her tracker ceased transmitting data. Up to that point, the device had been functioning normally and showed no technical anomalies, while both movement patterns and accelerometer data indicated normal behaviour. Staff conducted searches of the area for signs of predation but found none. While the precise cause remains uncertain, the most likely explanation is a collision with powerlines, followed by scavenging, and subsequent destruction of the tracker before the scheduled evening transmission.

In addition to the 2 tracked females, we are aware of one head started male that was predated by a fox, and another that died following a collision with powerlines.



The remains of a young male under high voltage powerlines.

We continue to receive occasional sightings of the remaining birds, many of which are reported by members of the public. These records provide valuable confirmation of the birds likely ongoing presence within the wider landscape, but identifying individuals is not possible.

8) Political and organisational developments

2025 brought significant improvements in the political position of the UK's Great Bustard population. The status of being a "Critical Species for Wiltshire" was confirmed when the Wiltshire council approved the Local Nature Recovery Strategy (LNRS).



Mapped Species Measure (GB): Increase population of Great Bustards

codes	Action	Reason
GBa	Create and manage arable, fallow, and grassland mosaics in known and potential habitat areas.	To provide breeding, nesting and foraging opportunities.
GBb	Protect Great Bustard nests from agricultural activity by avoiding spring mowing and identifying nests in silage fields for protection.	To protect nests and birds.
GBc	Undertake targeted predator control.	To protect nests and birds.
GBd	Carry out targeted rear-and-release for Great Bustards. Contact the Great Bustard Group (enquiries@greatbustard.org) for details and advice on new release sites.	To increase the population.

Informational Links:

- For more information on the Great Bustard, please see: [What is a Great Bustard? - Great Bustard Group](#)





Increase the population of Great Bustard, and expand its range, particularly in areas close to existing populations.

Why is the Great Bustard Important?

The Great Bustard is the only globally endangered bird that breeds in the UK, and although the population is small, it holds international significance. As the world's heaviest flying bird, it is an iconic species, featured on Wiltshire's county flag and a favourite among the public. Reintroduced in 2004, it now breeds in the wild, but faces major challenges in expanding its range and numbers. Its tendency to nest in silage fields and remain on the nest has led to high female mortality, highlighting the need for targeted conservation efforts.



Great Bustard Opportunity Areas

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The Great Bustard was also included in the Natural England (NE) Threatened Species Recovery Actions (TSRA). This is a major step forward for the Great Bustard in the UK. Inclusion in the TSRA does not bring a funding package with it, but it will significantly increase eligibility for funding opportunities and will strengthen other funding applications.

The Natural England summary of the TSRA is :

“Only species considered high priorities for species-focussed measures in England were action planned, determined by expert evaluation against two criteria.

The project identifies which species are most in of need recovery in England today and the specific actions required to progress their recovery. In so doing, it aims to inform species conservation priorities nationally and guide the development of future recovery projects.”

To have the Great Bustard included as a high priority for species focused measures by Natural England is a tremendous boost to the project, and one we hope will see other organisations being involved in the conservation of Great Bustards. The GBG welcomes this development. The actions are listed in the table below.

Threatened Species Recovery Actions

2025 Baseline

Technical Report and Spreadsheet User Guide

Version 1.0

August 2025

Natural England Joint Publication JP005



Scientific name (Column 'D')	Common name (Column 'E')	Great Britian Red List status (Column 'F')	TSRA action to be addressed (Column 'H')	TSRA action type (Column 'J')	How will your project address this action - describe what you will do and any outputs you propose to deliver. (50 words per row)
Otis tarda	Great Bustard	RE(br)	Annual productivity monitoring to assist with evaluation and identifying remedies and next step actions	Targeted monitoring	In 2025/26 SRP funded a project to identify exactly what needed to be done to identify drivers of population change and inform targeted, evidence- based conservation interventions. This project implements the recommendations in the project report. Agreed next actions include R&D of agri scheme options.
Otis tarda	Great Bustard	RE(br)	Nest finding using thermal drone and seek subsequent nest protection (both crop sacrifice and predator fencing) in arable areas.	Special (in situ) measure	Nest finding using thermal drones is an essential (first stage) component of the annual productivity monitoring, as well as being essential for nest protection.
Otis tarda	Great Bustard	RE(br)	Continue <u>headstarting</u> to boost productivity as necessary dependent on productivity monitoring results.	Scientific research	It will continue <u>headstarting</u> . Initial productivity monitoring results suggest that the productivity is sustainable, but growth will be slow without this measure.

In 2025 the GBG also received support from the NE Species Recovery Programme (SRP) which made the enhanced monitoring undertaken during the year possible. This support has made much of the work referred to in this annual report possible.

It is very much hoped that 2026 will see the beginnings of support for the Great Bustard in the UK coming from organisations other than the GBG. The official recognition of the species with the measures and recognition in the documents listed above are surely a significant forward step for the species in the UK.



9) Thanks and Acknowledgements

The Great Bustard Group is always indebted to its volunteer team who undertake tasks ranging from nest searching to fundraising to rearing chicks. Without them there would be no project and no Great Bustards in the UK. Particular assistance has come from the Cranbourne Chase National Landscape and the North Wessex Downs National Landscape who have provided a second drone and funding for ArcGIS training. Natural England funded the purchase of the trackers and further dedicated funding for monitoring. John and Kate Chitty MsRCVS provided veterinary care and treatment, advice, pre-release health screening and post mortem examinations. Jon Isherwood (WSBRC) for his valuable assistance in digitising records and training of GBG staff. Cotswold Wildlife Park for their assistance with incubation. The GBG expresses its ongoing gratitude to all its members, supporters and the individuals and charitable trusts and foundations who have made the project possible through their generosity.

Many supporters, both individuals and organisations, have given financial support but requested their support is not publicised.



**Cranborne
Chase**
National
Landscape



**North Wessex
Downs**
National
Landscape



WSBRC

Wiltshire & Swindon
Biological Records Centre



Wiltshire Council

Primaflow F&P
WE SIMPLY DELIVER MORE


Consano Earth
Rewilding the Land and Sea

**SWIRE
CHARITABLE
TRUST**

