



Animal &  
Plant Health  
Agency

## **Livestock Demographic Data Group: Sheep population report**

**Livestock population density maps for GB, using  
December 2024 data**

**Published February 2026**



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Data source: Sheep and Goat Inventory: Rapid Analysis and Detection of Animal related Risk (RADAR) data warehouse for England and Wales and ScotEID for Scotland

Data year: December 2024

[www.gov.uk/apha](http://www.gov.uk/apha)

APHA is an Executive Agency of the Department for Environment, Food and Rural Affairs and also works on behalf of the Scottish Government, Welsh Government and Food Standards Agency to safeguard animal and plant health for the benefit of people, the environment and the economy.

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## Who are these reports for and what is their purpose?

These reports are suitable for use in animal health and welfare policy work or by anyone who requires an estimate of the distribution and size of the sheep population at Great Britain (GB) level. This type of population level information is often required to provide official statistical returns to the World Organisation for Animal Health (WOAH), assess the economic or social impact of particular animal health policies, for contingency, disease monitoring/control and resource planning, or to provide evidence to trading partners.

## Who did this work?

The reports are produced by the Livestock Demographic Data Groups (LDDG). The LDDGs were formed in January 2014 and are made up of Animal and Plant Health Agency (APHA) representatives from data, epidemiology, species expert and GIS work groups.

## What does the data show about the population?

The maps show the density of animals (Figure 1) and the density of holdings (Figure 2). The estimated number of holdings and number of sheep per country is shown in Table 1. Compared to the December 2023 and January 2024 inventory, the number of sheep holdings in GB has decreased by 5.28% and the number of sheep has increased by 2.35% (Table 1). The number of sheep holdings has decreased across all three countries; by 3.31% in England, by 14.36% in Scotland and by 3.06% in Wales. The number of sheep has decreased in England (by 1.55%) and in Scotland (by 4.61%) and increased by 16.92% in Wales.

A livestock holding is defined as the location, including land and buildings, used to keep livestock and may be in use by more than one business. Each holding has a unique County Parish Holding (CPH). A livestock business can have more than one holding, which can include permanent holdings (used for more than one year) and temporary holdings (used for less than one year).

The maps in Figures 1 and 2 show the density of the sheep population in GB, and the density of sheep holdings in GB. Figure 1 shows that the sheep population of GB is highest, with a density of over 120 sheep per km<sup>2</sup>, in most parts of Wales and northern England, and part of Devon and southern Scotland. A similar pattern is seen in Figure 2, which shows that the density of sheep holdings is highest, with a density of over 53 holdings per 100km<sup>2</sup>, in most parts of Wales, and the south-west and northern England, with smaller areas of high holding density in the midlands and south-east England, and eastern and southern Scotland.

The data used is obtained from the annual Sheep and Goat inventory, which is carried out in December, and gathers data on the number of sheep and/or goats kept per holding.

Most lambs are born in the spring and then reared and sent for slaughter in the autumn. Therefore, the December inventory represents the adult breeding flock and only the lambs that are kept for breeding or fattening. Although the number of sheep is higher in the summer due to the annual lamb crop, the spatial distribution of sheep and sheep holdings is similar in winter and summer.

## What does the data not show about the population?

The data from the annual Sheep and Goat Inventory does not include the majority of lambs born during the previous year, because most lambs are born in the spring, after the inventory has taken place in December and are slaughtered prior to the next inventory.

According to the June 2024 Agricultural Survey of a sample of commercial farms in GB, the total number of sheep and lambs in June 2024 was 29.0 million, of which 15.1 million were lambs (52.0%) ([Livestock populations in the United Kingdom - GOV.UK](#)). This indicates that the GB sheep population decreased by approximately 47% between June 2024 and December 2024. This difference was mainly due to the June 2024 survey including the spring lamb crop, many of which were slaughtered before the December 2024 winter inventory.

## How accurate is the data?

There are important assumptions and uncertainties with these estimates, which the user should take into consideration. Limitations of the dataset are discussed in detail in the data quality statement ([Annex 1](#)) and it is important that the user considers these in the context of their work. Population and holding density maps are each classified to different scales and units and due care must be taken regarding their interpretation.

The Sheep and Goat Inventory holds information about the location and animal count of sheep holdings in GB in December. All sheep and goat keepers are required to register their holding and it is a legal requirement to complete the annual sheep and goat inventory. This is described in the data quality statement ([Annex 1](#)). The results are summarised in Table 1 and visualised in Figures 1 and 2.

Requests to fill in the inventory were sent to 110,374 keepers in GB that were previously recorded as keeping sheep and/or goats in the previous year's inventory, new registrations and/or in Sam (APHA customer database). The questionnaire was completed by 80,158 respondents, giving an overall return rate of 72.6%. From the survey responses, there were 65,364 holdings that were keeping sheep<sup>1</sup>.

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<sup>1</sup> Note that some respondents reported keeping sheep and/or goats at more than one holding (CPH) and sheep and/or goats may be kept at a CPH by more than one business.

For England, the inventory request was sent to 78,172 previously recorded keepers, and responses were received from 57,586 respondents (73.7%): there were 41,971 holdings keeping sheep.

For Scotland, the inventory request was sent to 15,201 previously recorded keepers, responses were received from 9,733 respondents (64.0%): there were 10,833 holdings keeping sheep<sup>1</sup>.

For Wales, the inventory request was sent to 17,001 previously recorded keepers. The total number of responses received was 12,839 (75.5%): 12,560 holdings were keeping sheep.

In comparison, the response rates for the previous year's inventory were 77.4% for England, 63.3% for Scotland, and 78.2% for Wales. The response rate for Scotland was lower than for England and Wales but is similar to the rate for the 2023 and 2024 inventory, when Scotland changed to e-mail reminders only and on-line only submissions (See [Annex 1](#)), which might have contributed to the large decrease in the number of holdings and sheep in Scotland, although keepers could contact ScotEID if they had difficulty in completing the survey online. Wales changed to on-line only submissions for the December 2024 inventory, but the response rate only dropped from 78.2% to 75.5%.

The characteristics of the non-responders are unknown, such as small ruminant holding type, and the effect of this missing data has not been evaluated, but assuming that many non-responders are no longer keeping sheep or goats, any underestimate in number of holdings and number of sheep is likely to be small.

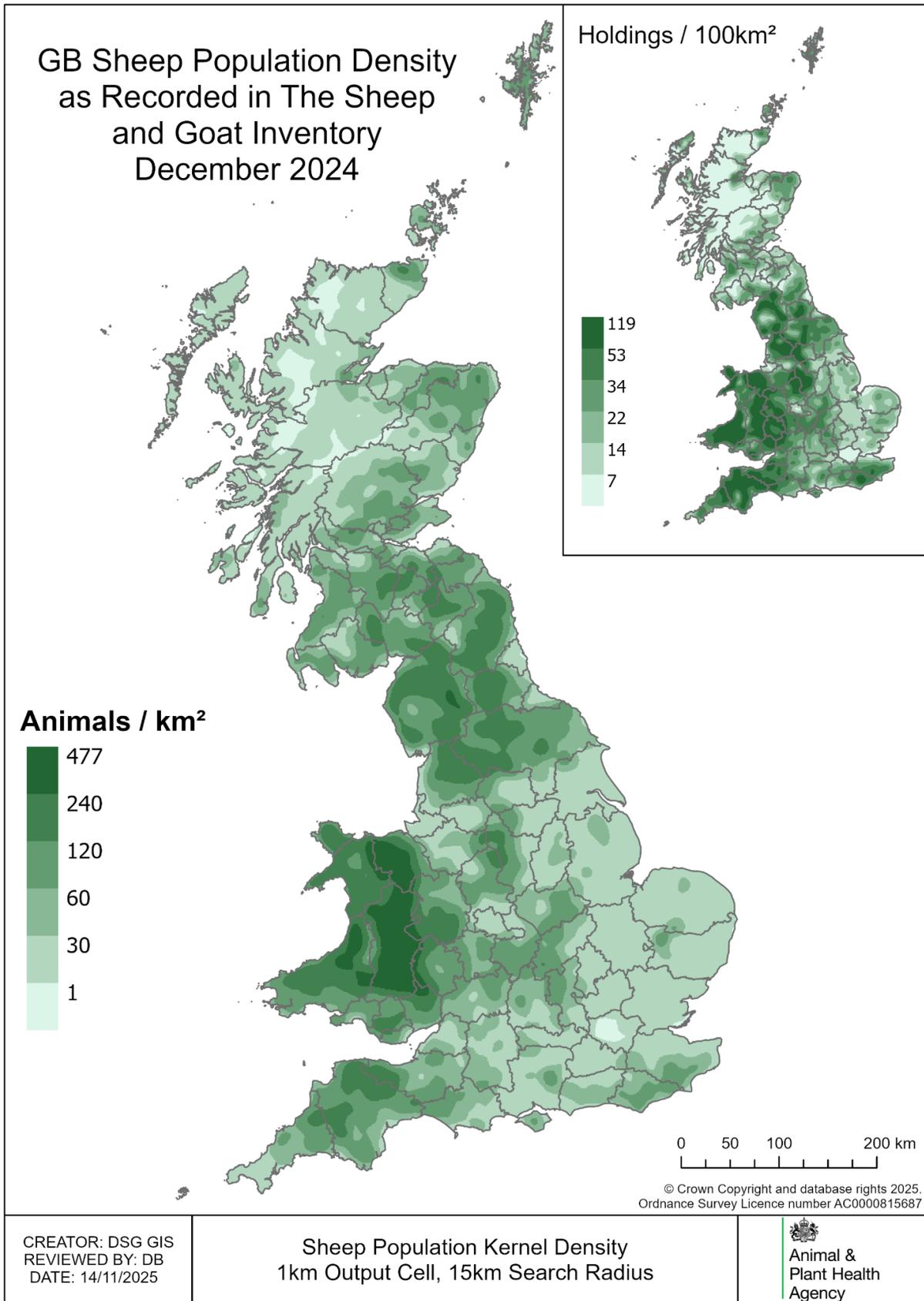
This sheep and goat inventory collected data on the number of animals kept on 1 December 2024 for all GB countries. Previous inventories collected data on 1 December for England and Scotland, and on 1 January for Wales. It is not expected that the change in collection date for Wales will affect the comparability of the data between December 2024 and previous years.

## How were the maps produced?

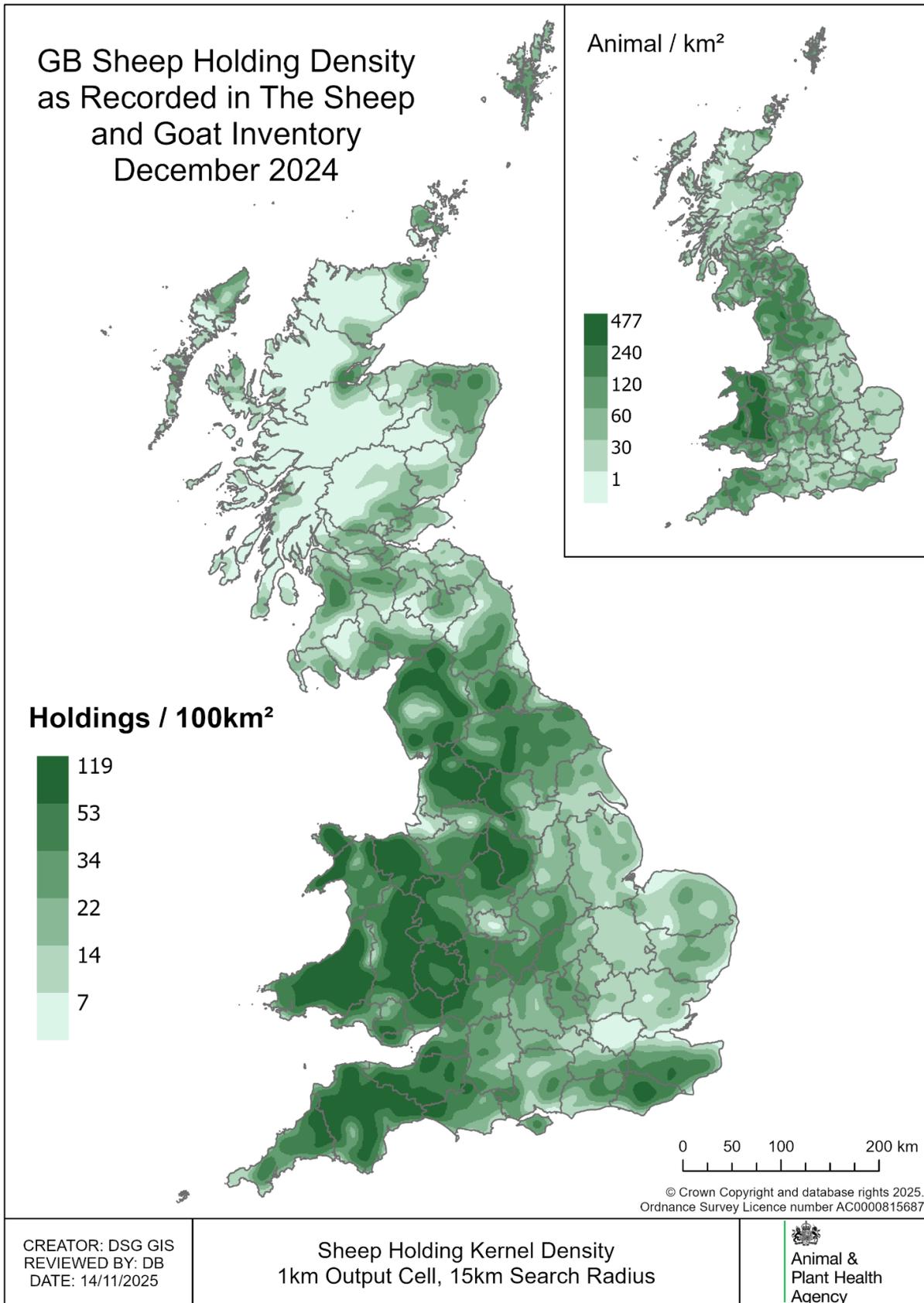
The maps have been created using the kernel density function in ArcGIS software. This tool distributes population information over a defined radius, creating a smooth density surface. Two key parameters that require adjustment are the search radius distance (15km radius used for the figures presented within this report) and the size of the output surface grid; their selection is recognised as a subjective process (Pfeiffer et al., 2008). A search radius of 15km was deemed sufficient to enable distinction between categories and a 1km grid square was used for the density surfaces themselves. The legend categories were limited to six, to aid in cross referencing with areas of the map.

Comparison between the maps was optimised by assigning similar parameters between the species. However, further refinement of the parameters for each dataset could

represent the information more accurately. Note that the ArcGIS Kernel Density tool does not take into account edge effects, and as such density estimates in and around coastal areas may be under estimated (Charpentier & Gallic, 2016).



**Figure 1. Sheep population density in GB (Sheep and Goat Inventory December 2024). For a description of the figure see [What do the data show about the population?](#)**



**Figure 2. Sheep holding density in GB (Sheep and Goat Inventory December 2024). For a description of the figure see [What do the data show about the population?](#)**

**Table 1: Number of sheep holdings and number of sheep by country in GB, December 2024 compared to December 2023 and January 2024.** The number of sheep holdings and number of sheep per county in December 2024 is provided in [Annex 2](#) and a reference map of all counties across GB is provided in [Annex 3](#).

Country	Dec 23 & Jan 24 Holdings	Dec 24 Holdings	% Change	Dec 23 & Jan 24 sheep	Dec 24 sheep	% Change
England	43,406	41,971	<b>-3.31%</b>	7,780,090	7,659,269	<b>-1.55%</b>
Scotland	12,649	10,833	<b>-14.36%</b>	3,591,006	3,425,346	<b>-4.61%</b>
Wales	12,956	12,560	<b>-3.06%</b>	3,805,440	4,449,315	16.92%
GB Total	69,011	65,364	<b>-5.28%</b>	15,176,536	15,533,930	2.35%

## Acknowledgements

The LDDG is grateful to Defra, Scottish Government, Welsh Government, and APHA’s Data Systems Group (DSG) staff who handle the Sheep and Goat Inventory data and Rapid Analysis and Detection of Animal Related Risks (RADAR) data warehouse for their assistance in producing this report.

## References

- Charpentier, A., & Gallic, E. (2016). Kernel density estimation based on Ripley’s correction. *Geoinformatica*, 20(1), 95–116. <https://doi.org/10.1007/s10707-015-0232-z>
- Pfeiffer, D. U., Robinson, T. P., Stevenson, M., Stevens, K. B., Rogers, D. J., & Clements, A. C. A. (2008). *Spatial Analysis in Epidemiology* (1st ed.). Oxford University Press.

## Annex 1: Data quality statement for sheep

### Introduction

This data quality statement provides an overview of the quality of the data used to underpin the kernel density holding and livestock maps. This statement is written in the context of the data being used to provide an overview of the livestock demographics within Great Britain. The statement may not necessarily relate to data quality for other purposes.

## Overview and purpose of source data used

Data was supplied by the APHA Data Systems Group (DSG) and sourced from the Sheep and Goat Inventory via the APHA Rapid Analysis and Detection of Animal-related Risks (RADAR) data warehouse for England and Wales, and directly from the Scottish government for Scotland.

The Sheep and Goat inventory was chosen to represent the sheep and goat data as this has the most inclusive coverage on holdings across GB. This dataset records the number of sheep and goats kept on all registered individual premises. The inventory data is collected once a year (on the 1st of December) by means of a questionnaire which every registered sheep and goat keeper in GB is requested to fill, and additional holdings recorded in Sam (APHA customer database). The questionnaire requests the number of sheep and/or goats kept per holding.

The Agricultural Survey was also considered as a source of data; however, response rates have been lower compared to the Sheep and Goat Inventory. This data is collected in the summer months and so includes lambs born in the spring and therefore show a much larger population than in the Sheep and Goat inventory. However, this survey only collects data on larger agricultural holdings and therefore smaller holdings are not represented. Additionally, it is only sent to a sample of holdings each year, with a full census only occurring every ten years. It was therefore decided that the sheep and goat inventory gave a better picture of all holdings in Great Britain, but the agricultural survey could be used if a summer count was required. In general, sheep numbers are approximately 90% higher in summer due to the presence of the lamb crop.

The Animal Movement Licensing System database (AMLS) was also considered as a source of data, but this only shows movements of batches of animals and not the number of animals on the holding, so it was decided this was not suitable.

### **1. Relevance of data** [*degree to which data meets user needs in terms of currency, geographical coverage, content and detail*]

**Spatial coverage:** The data covers GB (England, Scotland, and Wales).

**Temporal coverage:** The data presented is for 1 December 2024. The data was accessed in October 2025.

**Key data items available:** The dataset includes species (sheep or goat) and number of animals on holding and CPH.

### **2. Timeliness** [*the degree to which data represent reality from the required time point*]

**How often is the data collected?** The data is collected annually. The England, Scotland and Wales surveys have been aligned to 1 December, a change implemented from December 2024 which is reflected in this report. For earlier reports the inventory data was collected on 1 December for England and Scotland and 1 January for Wales.

**When does the data become available?** The data is available about 6 months after the surveys are collected, with the England and Wales results uploaded into RADAR (subject to data upload scheduling).

**Data reference period:** The data is a snapshot at the date of the survey.

**How often is the data updated?** Data is updated annually.

### 3. Accuracy and precision *[extent of data error and bias and how well data portrays reality]*

**How was the data collected?** For England questionnaires are sent once a year by post or by email to all holdings that have registered or are recorded as keeping sheep or goats. The questionnaire can be completed online or by post. For Scotland all keepers were directed towards online survey completion operated by ScotEID and only emails were sent to remind keepers to complete the inventory. For the December 2024 inventory, Wales also changed to online only survey completion operated by EIDCymru and emails as well as broadcast text messages through Rural Payments Wales (RPW) were sent to remind keepers to complete the inventory.

**Sample & collection size:** All holdings registered or recorded as keeping sheep or goats are required to complete the inventory, so the survey is intended to be a full census of all known potential sheep holdings. It is not known how many other holdings are keeping sheep that have not registered or been recorded in the England Livestock Information Service (LIS), ScotEID, EIDCymru or Sam. The counts of holdings and number of sheep are obtained from all the holdings that returned the inventory form.

**Further information on rules for registering a holding where sheep and goats are kept:**

<https://www.gov.uk/guidance/apply-for-a-county-parish-holding-cph-number>,  
<https://www.gov.uk/guidance/register-livestock-to-get-a-flock-or-herd-mark>.

**What steps have been taken to minimise processing errors?** The data collected through the survey is subject to manual validation to check the data accuracy. Not all data that fails validation can be corrected/confirmed as the survey team cannot always contact the keeper. There are several different errors that can be detected such as incorrect flock number or illegible forms. The team checks every form and verifies the information where possible.

**What are the response rates?** Response rates for the surveys conducted in December 2024 were 73.7% for England, 64% for Scotland and 75.5% for Wales.

**Are any parts of the population unaccounted for in the data collection?** Returns were not received from around 26.3% of holdings in England, 36.7% of holdings in Scotland and

24.5% holdings in Wales to which the questionnaires were sent. However, it is not known whether non-respondents represent particular types of small ruminant keeper or those no longer keeping small ruminants. There may also be holdings that are not registered or recorded and therefore did not receive the request to fill the inventory form. In order to minimise the number of holdings not represented, information about the annual inventory and how to access the questionnaire is shared through various social media alerts. There is guidance on how to register your holding and flock or herd at:

<https://www.gov.uk/guidance/sheep-and-goat-keepers-register-your-holding-and-flock-or-herd> and more information on how to keep and update a holding register in the annual sheep and goat inventory at: <https://www.gov.uk/guidance/sheep-and-goat-keepers-how-to-keep-a-holding-register>

#### **4. Comparability** *[how well this data can be compared with data taken from the same dataset and with similar data from other sources]*

**Within dataset comparability:** The format and survey methods are similar between years. However, since December 2023, Scotland only use email to request keepers to complete the inventory, and data is collected on-line only. Whereas in previous years, keepers were notified by post and could submit a paper questionnaire. For the December 2024 inventory, Wales also collected data on-line only.

The country-level surveys have been aligned to 1 December, in comparison to previous reports where the survey data was collected on 1 December for England and Scotland and 1 January for Wales. This change was implemented in December 2024 and is reflected in this report.

In this report, the number of sheep per holding (CPH) represents the total number of sheep kept at that holding on 1 December, whether they belong to only one or more than one keeper or business. In previous reports, this was also the case for England and Wales data, however for Scotland data, if multiple keepers kept sheep at the same CPH, each keeper was counted as a separate holding. This anomaly has been corrected for this report, which may partly account for the large decrease in the number of Scottish holdings but will not have affected the numbers of sheep.

**Other dataset comparability:** The annual Sheep and Goat Inventory, carried out in December, can be compared with the sheep population data collected during the Agricultural Survey, which is a sample survey of commercial flocks carried out in the summer and therefore also includes lamb populations. There was an approximately 45% decrease in the estimated sheep population in England, an approximately 47% decrease in Scotland, and an approximately 49% decrease in Wales, between the June 2024 Agricultural Census and the population in this report, which can mainly be attributed to the majority of the spring lamb crop being slaughtered before the winter inventory is carried out.

Defra has published official statistics on the livestock populations in the United Kingdom at 1 December 2024 ([Livestock populations in the United Kingdom at 1 December 2024 - GOV.UK](#)). The sheep population data is based on the Sheep and Goat Inventory but only relate to commercial holdings (keeping more than 20 sheep or 20 goats). “Population totals are estimated for sheep to account for the non-sampled and non-responding holdings. This is done using the technique known as ratio raising, in which the trend between the response data (December Sheep and Goat inventory) and base data (previous June Survey response data) is calculated for each item. The calculated ratio is then applied to the previous June Survey population data to give England level estimates for December.” This method, along with the inclusion of Northern Ireland, leads to a higher sheep population estimate than the actual figures presented in this report.

The Animal Movement Licensing System (AMLS) holds movement data, which can compare information on holding locations and relative sizes. However, AMLS does not record the number of sheep on the holding. Sam is a customer database in APHA, supporting registrations of customers, locations, units, temporary land applications and more, that contains data on usual stock numbers at the time the customer record was last updated, so may not reflect the current number of goats on the holding.

#### **5. Coherence** [*degree to which data can be or has been merged with other data sources*]

**How consistent is the data over time? If there are differences, what are they and what is their impact? Have there been changes to the underlying data collection?**

The list of keepers contacted in connection with their annual inventory obligation is derived from the list of holdings statutorily maintained by APHA for England, Scotland and Wales. Returns from those keepers who declare they are no longer keeping sheep or goats are used to update that list, and in turn update subsequent inventory-gathering exercises. For the December 2023 inventory, Scotland changed to on-line only data collection, whereas in previous years, keepers were notified by post and could submit a paper questionnaire, and no longer requested keepers to declare they were no longer keeping sheep or goats or had the intention to keep sheep or goats again in the future, potentially impacting the ability to maintain an up to date livestock keeper list. For the December 2024 inventory, Wales also changed to on-line only data collection.

**Have any real-world events impacted on the data since the previous release?** No.

**What other data sources is this data comparable with?** Location data is comparable between the Agricultural Survey, Sam and the Animal Movement Licensing System (AMLS). The Agricultural survey data has been used for total population and the AMLS for total holdings.

**What other data sources in society report similar information? How do these data sources compare?** Industry has its own datasets, but these are obtained from, for example, the sheep and goat inventory and Agricultural Survey. It is thought they are unlikely to offer any additional information.

## 6. Interpretability [how well the data is understood and used appropriately]

**Is there a particular context that this data needs to be considered within?** This is a December survey and as sheep production is highly seasonal the population will be much higher during the summer, post lambing.

**What other information is available to help users better understand this data source?** Information about the annual sheep and goat inventory is available here: [Sheep and goat keepers: complete your annual inventory - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/consultations/sheep-and-goat-keepers-complete-your-annual-inventory).

**Are there any ambiguous or technical terms that may need further explanation?** No.

## 7. Accessibility [availability of relevant information and access to this data in a convenient and suitable manner]

**What data is shared and with whom?** Addresses and coordinates of individual locations cannot be released without Confidentiality Agreements. DSG access data through RADAR or directly from Scottish Government.

### Contact details for data source queries:

Agricultural Survey England: [Farming-statistics@defra.gov.uk](mailto:Farming-statistics@defra.gov.uk)

Agricultural Survey Wales: [Stats.agric@wales.gov.uk](mailto:Stats.agric@wales.gov.uk)

Agricultural Survey Scotland: [agric.stats@scotland.gov.uk](mailto:agric.stats@scotland.gov.uk)

ScotEID Livestock Traceability - [support@scoteid.com](mailto:support@scoteid.com)

Freedom of Information (FOI), Environmental Information Regulations (EIR) and Subject Access requests - [enquiries@apha.gov.uk](mailto:enquiries@apha.gov.uk)

## Annex 2: Number of sheep holdings and number of sheep per county

**Table 2: Total number of sheep holdings and number of sheep per county for England, based on the results from the GB Sheep and Goat Inventory for December 2024.**

County	Number of sheep holdings	Number of sheep
Avon	582	43,426
Bedfordshire	197	18,747
Berkshire	205	27,801

County	Number of sheep holdings	Number of sheep
Buckinghamshire	509	105,789
Cambridgeshire	388	25,299
Cheshire	884	105,674
Cleveland	103	16,882
Cornwall and Isles of Scilly	1,531	228,611
Cumbria	3,095	984,325
Derbyshire	1,344	180,606
Devonshire	3,772	709,260
Dorset	1,011	136,334
Durham	971	275,584
East Sussex	805	117,908
Essex	468	23,255
Gloucestershire	1,058	147,762
Greater London	76	3,392
Greater Manchester	327	25,876
Hampshire	883	88,799
Herefordshire	1,335	275,241
Hertfordshire	224	19,854
Humberside	623	58,733
Isle of Wight	167	22,461
Kent	1,111	130,720
Lancashire	1,691	332,679
Leicestershire	730	144,676

County	Number of sheep holdings	Number of sheep
Lincolnshire	892	120,567
Merseyside	64	4,631
Norfolk	784	85,775
North Yorkshire	3,169	845,598
Northamptonshire	659	132,256
Northumberland	1,110	591,754
Nottinghamshire	354	45,399
Oxfordshire	574	101,278
Shropshire	1,763	391,323
Somerset	1,866	274,163
South Yorkshire	350	47,004
Staffordshire	1,323	170,324
Suffolk	608	58,606
Surrey	394	28,378
Tyne & Wear	50	4,963
Warwickshire	647	119,767
West Midlands	109	14,012
West Sussex	485	63,051
West Yorkshire	942	87,490
Wiltshire	859	109,723
Worcestershire	879	113,513

**Table 3: Total number of sheep holdings and number of sheep per county for Scotland, based on the results from the GB Sheep and Goat Inventory for December 2024.**

County	Number of sheep holdings	Number of sheep
Aberdeenshire	943	288,599
Angus	239	87,772
Argyll	658	206,753
Ayrshire	618	221,845
Banffshire	324	111,021
Berwickshire	188	104,225
Bute	75	21,697
Caithness	395	100,824
Clackmannanshire	20	7,340
Dumbartonshire	84	28,921
Dumfriesshire	586	275,424
East Lothian	86	47,392
Fife	214	73,809
Inverness-shire	1,033	155,622
Kincardineshire	159	40,846
Kinross	55	16,993
Kirkcudbright	354	142,006
Lanarkshire	443	180,430
Midlothian & Edinburgh	130	87,038
Moray	141	42,385
Nairn	45	15,016

County	Number of sheep holdings	Number of sheep
Orkney	362	69,223
Peebles	124	92,183
Perth	585	270,949
Renfrew	102	31,540
Ross & Cromarty	978	97,509
Roxburgh	295	171,155
Selkirk	76	65,975
Shetland	616	137,606
Stirling	216	75,086
Sutherland	326	48,544
West Lothian	79	20,080
Wigtown	284	89,538

**Table 4: Total number of sheep holdings and number of sheep per county for Wales, based on the results from the GB Sheep and Goat Inventory for December 2024.**

County	Number of sheep holdings	Number of sheep
Clwyd	1,655	630,514
Dyfed	4,057	976,999
Gwent	824	195,106
Gwynedd	2,220	777,362
Mid Glamorgan	397	123,480
Powys	2,907	1,633,100
South Glamorgan	184	34,701
West Glamorgan	316	78,053

