

POLICY BRIEF: Cattle and sheep movement patterns from the BTV-3 Temporary Control Zone in September-October (2021-2025)

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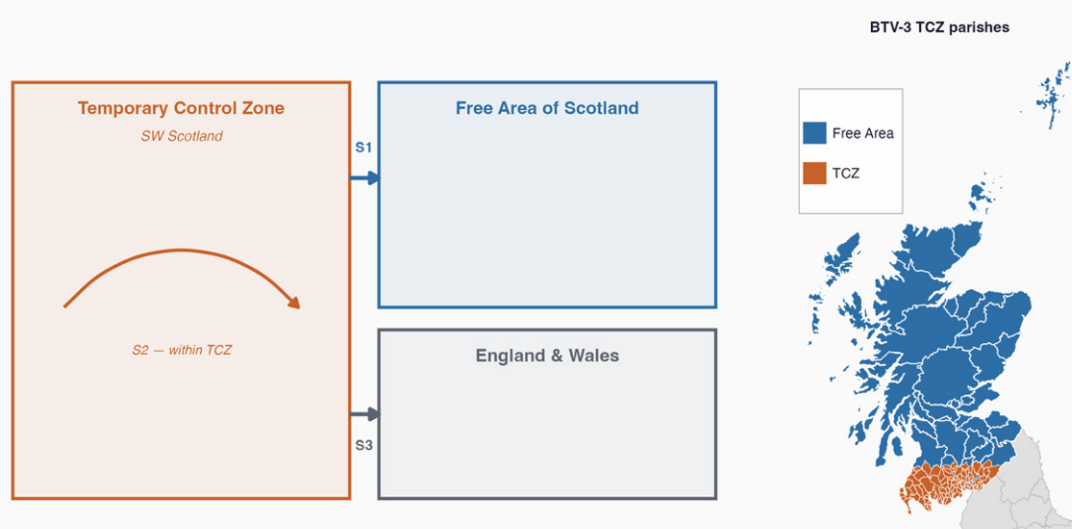
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Overview

The BTV-3 Temporary Control Zone (TCZ) in south-west Scotland imposes movement restrictions on ruminants entering the Scottish Free Area. To estimate the potential impact of the TCZ on ruminant movements during September and October 2026, we used ScotEID livestock movement records from September and October 2021-2025 to quantify cattle and sheep movements originating from the TCZ and destined for one of three destination categories: the Scottish Free Area (S1), another location within the TCZ (S2), or England and Wales (S3) (see Figure 1).

In a typical year during September and October, approximately 145,500 sheep and 40,600 cattle move from premises in the TCZ. Of these, around 16,700 sheep and 13,000 cattle move into the Scottish Free Area (S1) (see Figure 2). Movements into the Free Area represent a substantially greater proportion of cattle movements from the TCZ (32%) than of sheep movements (12%). Livestock markets play a central role in movements from the TCZ into the Scottish Free Area. Almost all sheep moving to the Free Area (98%) passed through a livestock market, while the corresponding proportion for cattle ranged from 69% to 88% across the study period.

Movement scenarios from the BTV-3 Temporary Control Zone



S1: TCZ → Free Area of Scotland. S2: movement within TCZ. S3: TCZ → outside Scotland.

Figure 1. Movement pathways from the BTV-3 Temporary Control Zone (TCZ). S1 represents movements from the TCZ into the Scottish Free Area; S2 represents movements within the TCZ; and S3 represents movements from the TCZ to England and Wales.

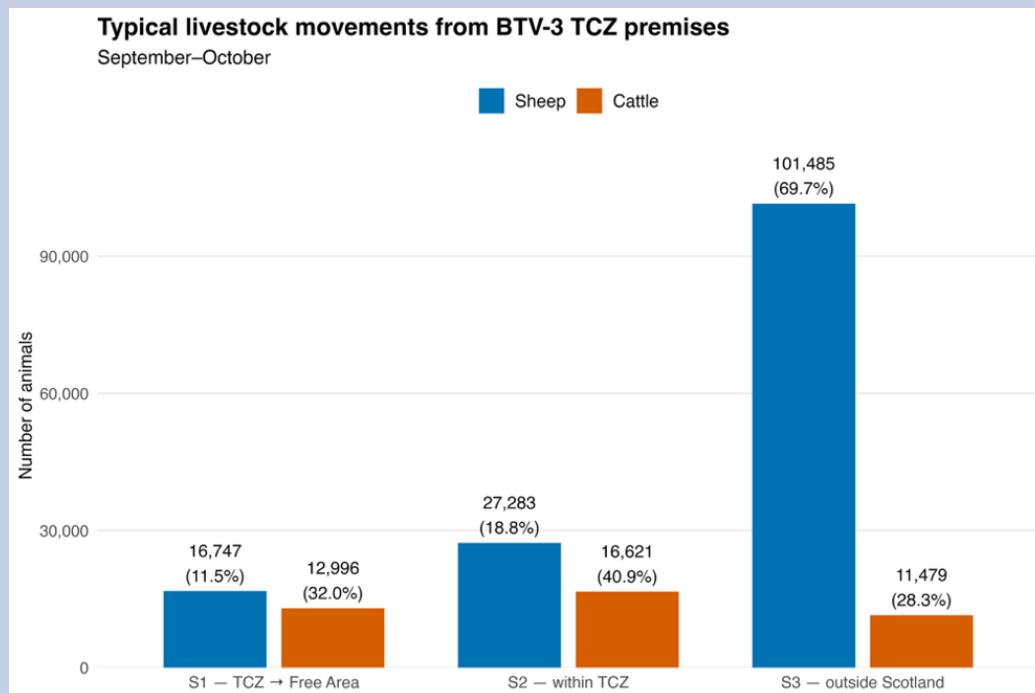


Figure 2. Typical cattle and sheep movements originating from BTV-3 Temporary Control Zone (TCZ) premises during September–October, by movement pathway. Percentages in brackets show the proportion of all TCZ-origin movements for each species. Sheep figures are five-year annual means (2021–2025); cattle figures are medians across the reference years 2022, 2023 and 2025. S1 = TCZ to Scottish Free Area; S2 = within TCZ; S3 = England and Wales.

Objectives

The BTV-3 TCZ was established in response to confirmed BTV-3 cases in south-west Scotland and covers Ayrshire, Dumfriesshire, Kirkcudbrightshire, Roxburghshire and Wigtownshire. To characterise livestock movement patterns associated with the TCZ, we aimed to: (i) quantify historical movement volumes and seasonal patterns for cattle and sheep originating in the area now designated as the TCZ; (ii) describe movements according to whether animals moved into the Scottish Free Area (S1), remained within the TCZ (S2), or moved to England and Wales (S3); and (iii) identify the main destinations of movements and the role of livestock markets in facilitating movements from the TCZ to the Scottish Free Area.

Major Findings

In a typical year, during September and October, approximately 145,500 sheep and 40,600 cattle move from premises within the TCZ. Most sheep movements are destined for England and Wales (S3; approximately 70%), while cattle movements are more evenly distributed across the three destination categories: approximately 32% move to the Scottish Free Area (S1), 41% remain within the TCZ (S2), and 29% move to England and Wales (S3).

The total number of animals moving from the TCZ to the Scottish Free Area (S1) is approximately 16,700 for sheep and 13,000 for cattle in a typical September–October period. However, such movements account for only 12% of all sheep movements from the TCZ, compared with 32% of all cattle movements.

The timing of movements differs between species. Most sheep movements from the TCZ into the Free Area occur in September (68.5% of S1 movements over the five-year period). Cattle movements consistently increase in late September and peak in mid-October. In most years, the majority of cattle movements from the TCZ occurred in October, regardless of destination.

Livestock markets play an important role in S1 movements. Approximately 98% of sheep moving from the TCZ to the Free Area passed through a livestock market, with Lanark Mart and Ayr Mart handling the largest shares (31% and 29%, respectively). For cattle, between 69% and 88% of S1 movements were routed through livestock markets, with Stirling United Auctions, Newton Stewart Mart and Castle Douglas Mart being the three most frequently used markets over the five-year study period.

Destinations also differ between species. Ayrshire was the principal destination in the Free Area for sheep, receiving approximately 35% of S1 movements, followed by Lanarkshire (21%). For cattle, Aberdeenshire was the principal destination, accounting for approximately 33% of S1 movements, followed by Ayrshire and Berwickshire.

Relevance to Policy

The findings provide an evidence base for understanding the scale, timing and geographical distribution of livestock movements originating within the TCZ. Historical patterns show substantial movement between the TCZ and the Scottish Free Area during September and October, with differences in the timing and destinations of cattle and sheep movements. The prominent role of livestock markets highlights important nodes within the livestock movement network. These baseline data can support assessments of the potential implications of current and future disease control measures affecting livestock movements.

Important Assumptions and Limitations

Movement records were extracted from ScotEID for September and October of 2021-2025 and represent historical movement patterns. Movements to slaughter were excluded. Twenty-one parishes are only partially within the TCZ but were included in full because they could not be spatially apportioned, which may slightly overestimate movements originating within the TCZ. For sheep, typical movement volumes were estimated using annual means across all five study years. Cattle movements were analysed across all five study years; however, 2021 and 2024 were considered atypical and were excluded when estimating typical movement volumes. Summary estimates for cattle are therefore reported as medians across 2022, 2023 and 2025. Cross-border movements to England and Wales (S3) should be interpreted cautiously because ScotEID records may not capture all cross-border movements.

Links to Existing Publications and Reports

- [EPIC_202627_REP_004v2_Cattle_moves_TCZ](#)
- [EPIC_202627_REP_005v2_Hist sheep moves from SW Scot BTV TCZ](#)