

**Module: GIS**

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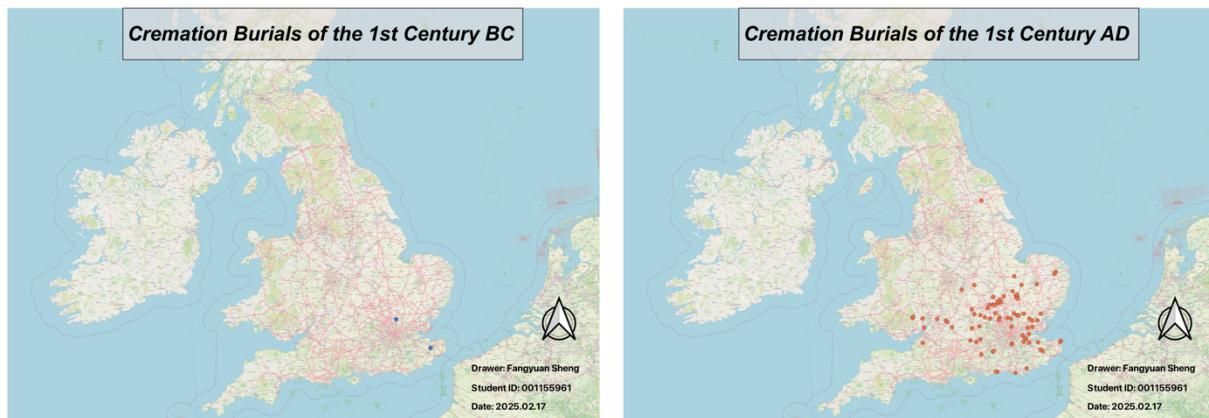
### **How Did Cremation Burial Spread in England?**

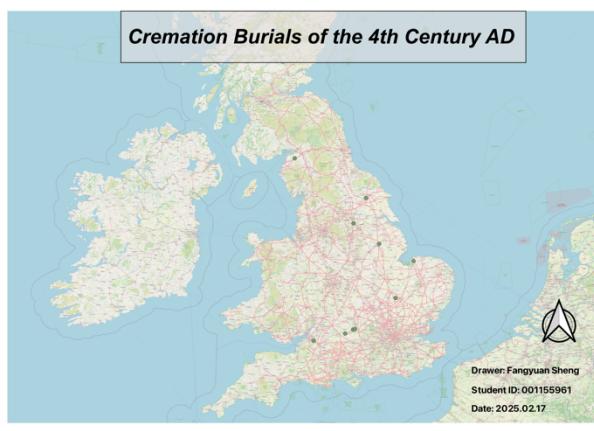
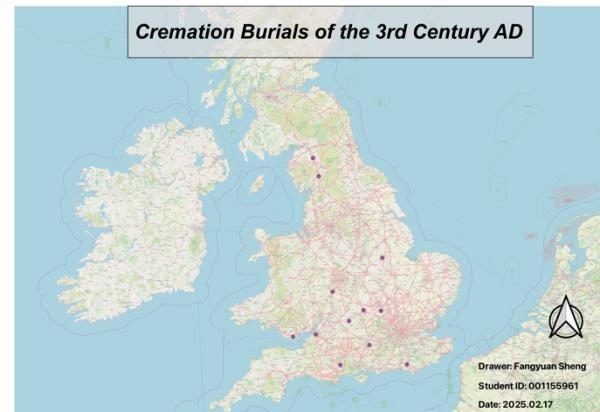
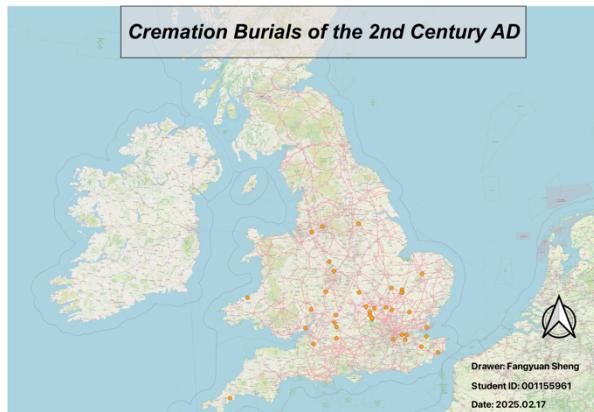
Cremation burial, a practice long observed in parts of southeast England (Philpott 1991), raises interesting questions about how it spread over time. In which regions did it emerge, when did it begin, and what specific trends are worth exploring? These aspects are crucial for understanding the expansion of cremation burial.

#### **General Trend**

The map below illustrates a concentration of cremation burials in southeastern England, beginning with a few sites in Kent and Essex in the 1st century BC. By the 1st century AD, the practice expanded to areas like Hertfordshire, Bedfordshire, Cambridgeshire, and Buckinghamshire, while also spreading more diffusely across areas such as Suffolk, Sussex and Gloucestershire. Starting in the 2nd century AD, cremation burial gradually spread westward and northward, reaching the west coast of Wales by the 2nd century AD and the northern region near Carlisle by the 3rd century AD. However, after the 3rd century, the number of new cremation burials seems to have diminished, with only a few new burials in the northeastern borders and Somerset.

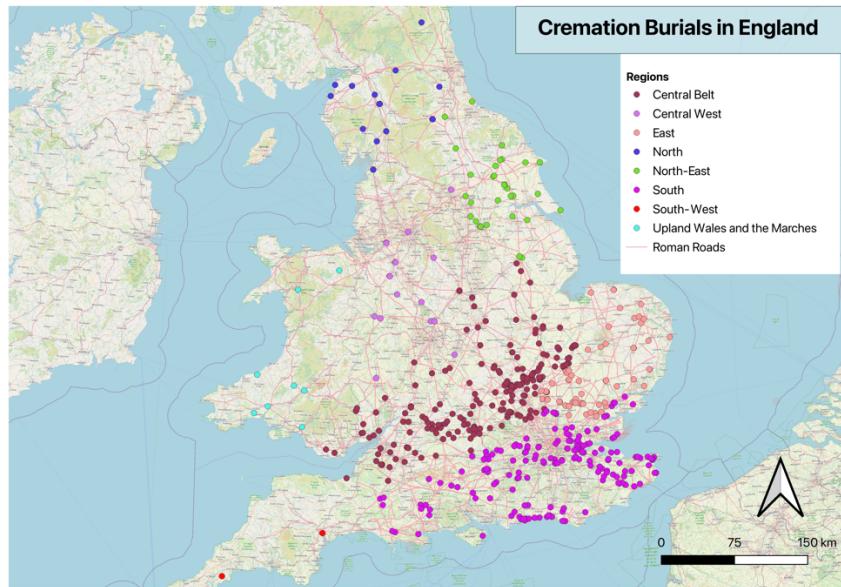
The data is of high quality and reveals a chronological trend that aligns with recent research, showing that cremation burials supplanted inhumation as the dominant burial practice by the late 1st century AD, before being replaced by inhumation by the start of the 3rd century AD (Biddulph 2006).





## Burial distribution across region

A detailed analysis of burials across different regions of England also reveals varying distributions of burials along Roman roads.



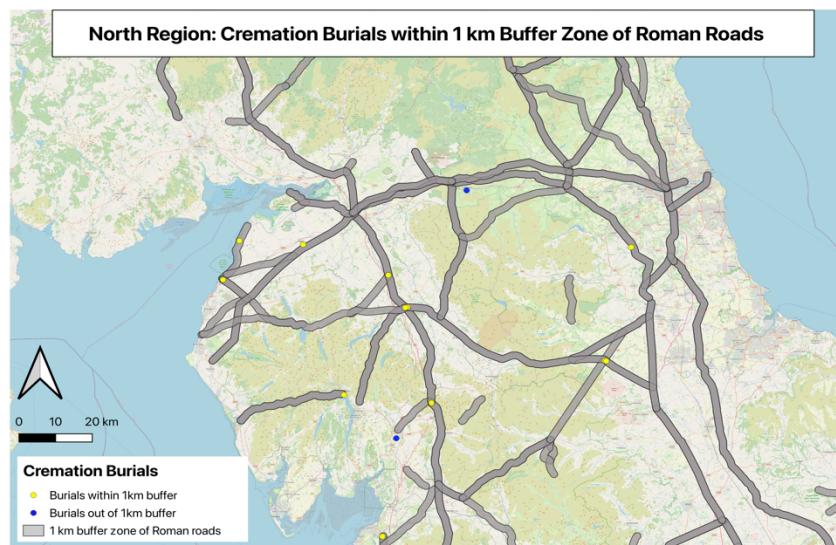
The following table shows the percentage of burials located within different buffer zones—100m, 500m, 1km, 2km, and 5km—of Roman roads. The data indicates that cremation burials in the North are more likely to be found near the roads, with 31.3% of burials within the 100m zone and 93.8% within the 5km zone, the highest percentages of any region. In contrast, burials in the Central Belt and Southern regions show less of a correlation with proximity to Roman roads.

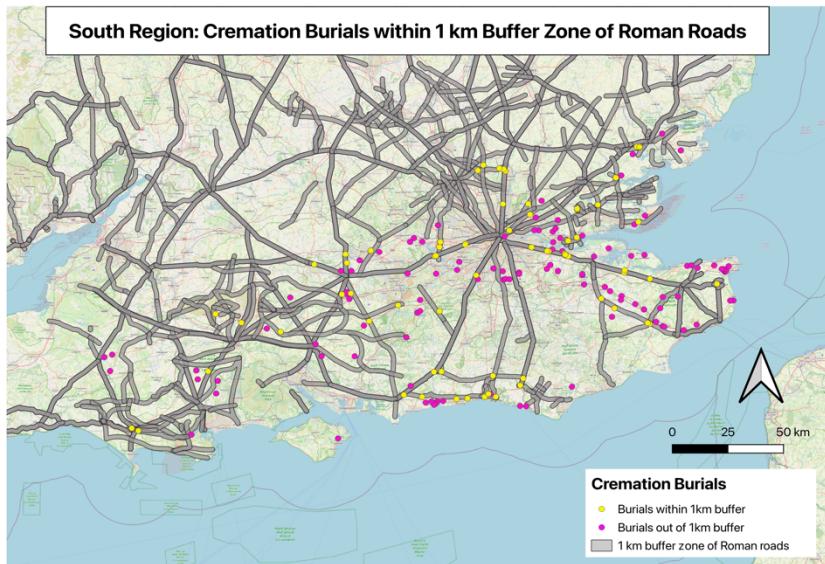
The pattern may be related to the possibility that the cremation practice spread to the north alongside the expansion of cities along Roman roads, while the south appears less influenced by military activities.

**Percentage of Cremation Burials Within Various Distance Zones**

Regions	buffer 100	buffer 500	buffer 1000	buffer 2000	buffer 5000
Central Belt	16.3%	33.0%	49.3%	68.0%	87.2%
Central West	29.4%	47.1%	52.9%	76.5%	82.4%
East	19.4%	50.7%	64.2%	80.6%	91.0%
North	31.3%	62.5%	81.3%	81.3%	93.8%
North-East	25.0%	37.5%	53.1%	62.5%	84.4%
South	10.4%	29.5%	38.8%	56.8%	86.3%
South-West	50.0%	50.0%	50.0%	50.0%	50.0%
Upland Wales and Marches	25.0%	50.0%	62.5%	62.5%	62.5%
<i>Max Difference</i>	39.6%	33.0%	42.5%	31.3%	43.8%

Further, the 1km distance zone is particularly useful for distinguishing between regions, with a 42.5% difference in percentage, highlighting sharp regional variations. While the 5km zone is also meaningful, it is less useful than the 1km zone due to the large area it covers. The map below illustrates the percentage differences between the North and South regions.



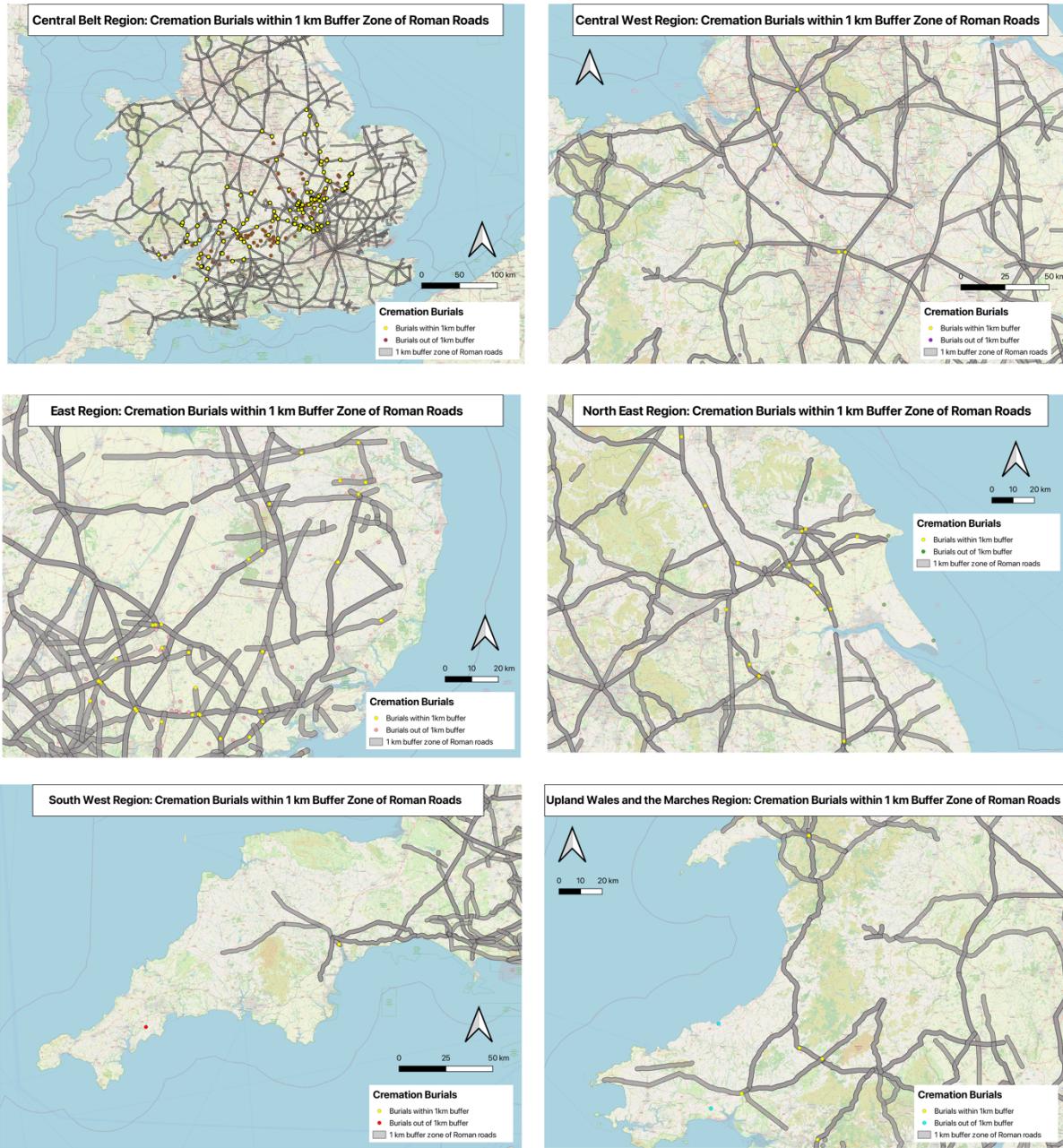


At last, the percentage of burials increases as the distance from the roads expands. In the East and North regions, the highest percentage of burials is found within the 100-500m range, with a significant increase of 31.3%. In the North-East and South regions, however, the most notable increase in percentage occurs when the buffer area extends from 2km to 5km, indicating that cremation burials in these areas are often located further from the roads.

#### Percentage Increase in Cremation Burials Across Different Distance Zones

Regions	buffer 500-100	buffer 1000-500	buffer 2000-1000	buffer 5000-2000
Central Belt	16.7%	16.3%	18.7%	19.2%
Central West	17.6%	5.9%	23.5%	5.9%
East	<b>31.3%</b>	13.4%	16.4%	10.4%
North	<b>31.3%</b>	18.8%	0.0%	12.5%
North-East	12.5%	15.6%	9.4%	<b>21.9%</b>
South	19.1%	9.3%	18.0%	<b>29.5%</b>
South-West	0.0%	0.0%	0.0%	0.0%
Upland Wales and Marches	25.0%	12.5%	0.0%	0.0%

## Appendix: Cremation burials within 1km buffer zone of different regions



## Bibliography

- Philpott, R.A. 1991: Burial Practices in Roman Britain: A Survey of Grave Treatment and Furnishing A.D. 43–410, BAR British Series 219 (Oxford)
- Biddulph, E. 2006: The Roman Cemetery at Pepper Hill, Southfleet, Kent, CTRL Integrated Site Report Series org/10.5284/1008714