

Recording Historic Farmsteads

Asesiad Wrth Ddesg /
Desk Based Assessment 2024 - 2025



Llywodraeth Cymru
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Heneb
Gwynedd Archaeology



Recording Historic Farmsteads

Asesiad Wrth Ddesg/ Desk Based Assessment 2024 - 2025

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Ysgrifenydd gan / Written by: Carolina Guimarães Ferreira

Darluniadau gan/Illustrations by: Carolina Guimarães Ferreira

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Cyhoeddwyd gan Ymddiriedolaeth Archaeolegol Gwynedd
Ymddiriedolaeth Archaeolegol Gwynedd
Craig Beuno, Ffordd y Garth,
Bangor, Gwynedd, LL57 2RT

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Cadeirydd / Chair David Elis-Williams MA(Oxon), MSc, CPFA
Prif Archaeolegydd/Chief Archaeologist - Andrew Davidson, BA., MCIfA

Mae Ymddiriedolaeth Archaeolegol Gwynedd yn Gwmni Cyfyngedig (Ref Cof. 1180515) ac yn Elusen (Rhif Cof. 508849)
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CRYNODEB ANNHECHNEGOL

Mae'r prosiect hwn yn rhan o fenter Cymru gyfan sydd wedi'i dylunio i greu set o bolygonau GIS o adeiladau fferm traddodiadol sydd wedi goroesi er mwyn cynhyrchu data ar gyfer cynlluniau amaeth-amgylcheddol nawr ac yn y dyfodol. Arolwg diweddaraf (2024/25) canolbwyntio ar nodweddu ffermdai yn ardaloedd Arfon, Eryri a Dyffryn Conwy. Canlyniadau'r dadansoddiad priodweddau a dosbarthiad yr ardal astudio datgelodd ragoriaeth cynlluniau iard rhydd a iard rheolaidd i ffermdai, tra bod cynlluniau llinellol a iard rhydd yn cael eu priodoli yn bennaf i ddaliadau bach. Canfuwyd cyfran ychydig yn uwch o allfermyddoedd yn cynnwys un i ddau adeilad wedi'u gosod o fewn iard, gyda mwy o allfermyddoedd adeilad sengl wedi'u lleoli'n gyffredin mewn ardaloedd ucheldirol. Mae'r cynlluniau hyn, wedi'u crynhoi'n bennaf mewn dyffrynnoedd isel ac ar lethrau, yn adlewyrchu defnydd addasol o'r dirwedd ar gyfer amaethyddiaeth. Mae tirwedd amaethyddol bresennol yr ardal astudio yn adlewyrchiad o'r trawsffurfiadau a'r datblygiadau diwedd y 18fed ganrif a dechrau i hanner cyntaf y 19eg ganrif.

NON TECHNICAL SUMMARY

This project forms part of a pan-Wales initiative designed to create a set of GIS polygons of surviving traditional farm buildings in order to produce data for current and future agri-environmental schemes. The latest survey (2024/25) focused on the characterisation of farmsteads in the Arfon, Snowdonia and Conwy Valley areas. Results from the attribute analysis and distribution of the study area revealed the predominance of loose courtyard and regular courtyard plans attributed to farmsteads, while linear and loose courtyard plans were chiefly attributed to smallholdings. A slightly higher proportion of outfarms consisted of one to two buildings set within a yard, with single building outfarms more commonly found in areas of upland. These layouts, predominantly concentrated in low-lying valleys and slopes, reflect adaptive use of the landscape for agriculture. The present-day agricultural landscape of the study area is a reflection of the transformations and developments of the late 18th and early to mid-19th centuries.

1 INTRODUCTION

The project was designed with the principal aim of producing polygons of traditional farm buildings that would inform future land management schemes. A program of polygonisation of features in farmland and woodland had previously been carried out by the Welsh Archaeological Trusts.

A large proportion of farms retain traditional farm buildings; a category defined as buildings predating the end of the First World War. The current project aims to record buildings falling into this category thus providing a register of traditional farm buildings.

Traditional farm buildings are an acknowledged deficit within the Historic Environment record and are generally considered to be at risk as farming practices evolve and diversify. The creation of this comprehensive dataset will influence Heritage Management work, Historic Environment Record enquiries and Development Control decision making.

A pilot project was carried out by Clwyd-Powys Archaeological Trust in 2015/16 which examined an area in Radnorshire (CPAT Report No 1359). This allowed an efficient methodology to be formulated. The project was continued in Wrexham (CPAT Report No 1501) in 2016/17, North Ardudwy (GAT report No 1422) in 2017/18, South Anglesey (GAT report No 1478) in 2018/19, the Carneddau (GAT report 1502) in 2019/2020, Ardudwy (GAT report No 1585) in 2020/21, and South Meirionnydd (GAT report 1621) in 2021/22.

A second element was added to the project in the form of a study of the character of farmsteads following the Welsh Farmstead Mapping Programme, a manual that sets out the guidelines for recording the character of farmsteads. This methodology was developed and adapted from the National Farmsteads Character Statement by English Heritage (now Historic England). The character statement aims to “provide a consistent understanding of farmstead character at a landscape level, through recording the distribution, plan-type and degree of change seen between historic mapping and the present” (Lake 2014 and Lake and Edwards 2017).

The aim of the 2022/2023 survey (GAT report No 1657) was to polygonise the remaining areas of Anglesey and Meirionnydd that had not been covered in previous years, but in order to speed up the process it was made necessary to focus exclusively on the characterisation and production of a record of farmsteads following the methodology set out by the Historic Farmsteads manual (Lake and Edwards, 2017). This methodology has been continued and applied to the 2023/24 survey of the Llŷn peninsula (GAT report No 1732) and to this year’s survey (2024/25) which has covered all other areas within the Gwynedd Archaeological Trust boundary (Figure 01).

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3 METHODOLOGY

3.1 Introduction

Pilot projects were carried out by Clwyd-Powys Archaeological Trust in 2015/16 and 2016/17. The rest of the Welsh Archaeological Trusts (WATs), including GAT started work on the project in 2017/18 in the form of limited pilot projects designed to develop and implement a consistent methodology for the identification and recording of historic farmsteads across Wales. A meeting was held in the CPAT offices before the project commenced. Abi McCulloch and Chris Martin described the methodology that they had developed for the polygonisation of buildings and Jeremy Lake, who had previously worked on the English Heritage farmstead characterisation project, presented a manual for recording historic farmstead character (Welsh Farmstead Mapping Programme, Lake and Edwards 2017). It was recognised that the characterisation element was potentially the most time-consuming element of project so this was streamlined, and 14 different fields were identified as the core features that should be recorded. Jeremy Lake subsequently visited all the WAT offices in order to provide guidance for the characterisation project.

Gwynedd Archaeological Trust agreed to carry out a pilot project covering an area of Northern Arddudwy in 2018. The methodology established by CPAT and Jeremy Lake was used and CPAT provided a template MapInfo Table for the characterisation process. It was, however, necessary to add an additional 18 fields of metadata to conform to Gwynedd Historic Environment's spatial data standards. All digitisation was carried out using MapInfo desktop geographic information system (GIS) and one table was produced, G2496_HF_2024_25, containing the farmstead characterisation data.

The methodology established in the pilot project has been adopted by GAT for subsequent phases of the project. The current phase of the project produced historic farmstead characterisation of the Arfon, Snowdonia and Conwy Valley areas.

Plan Type Primary Attribute	DISP	Dispersed
	LC	Loose Courtyard
	LIN	Linear
	LP	L-plan (attached house)
	PAR	Parallel
	RC	Regular Courtyard
	ROW	Row Plan
	SING	Single building (use for field barns etc. where there is no yard)
	UNC	Uncertain
Plan Type Secondary Attribute	1, 2, 3, 4	No. of sides to loose courtyard formed by <i>working</i> agricultural buildings
	L3 or L4	Yard with an L-plan range plus detached buildings to the third and/or fourth side of the yard (may be used with LC or RC dependent on overall character)
	L	Regular Courtyard L-plan
	u	Regular Courtyard U-plan
	e	Regular Courtyard E-plan
	ful	Full Regular Courtyard plan
	cl	Cluster (Used with DISP)
	dw	Driftway (Used with DISP)
	my	Multi-yard (Used with DISP or RC)
	cov	Covered yard forms an element of farmstead

	d y	Additional detached elements to main plan Presence of small second yard with one main yard evident
Tertiary Attribute	Codes as per Secondary Attribute table e.g. LC1d = Loose Courtyard with building to one side of yard with additional detached buildings; DISPmyL = Dispersed multi-yard group including a prominent Regular L-plan within it	
Survival	EXT ALT ALTS DEM HOUS LOST	Extant – no apparent alteration Partial Loss – less than 50% change Significant Loss – more than 50% alteration Site remains but no OS 2nd edition buildings legible Farmhouse only survives No evident trace of farmstead/outfarm site
Sheds	SITE SIDE	Large modern sheds on site of historic farmstead – may have destroyed historic buildings or may obscure them Large modern sheds to side of historic farmstead – suggests farmstead probably still in agricultural use
Farmhouse Position	ATT DET UNC	Attached to agricultural range Detached Uncertain (cannot identify which is farmhouse)

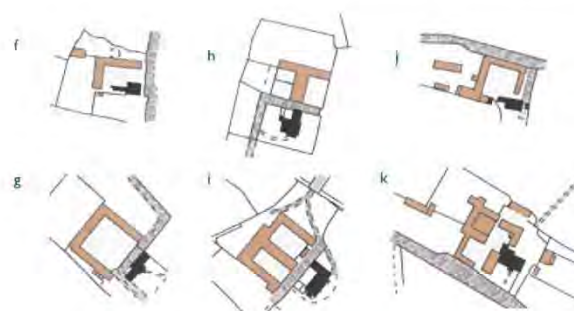
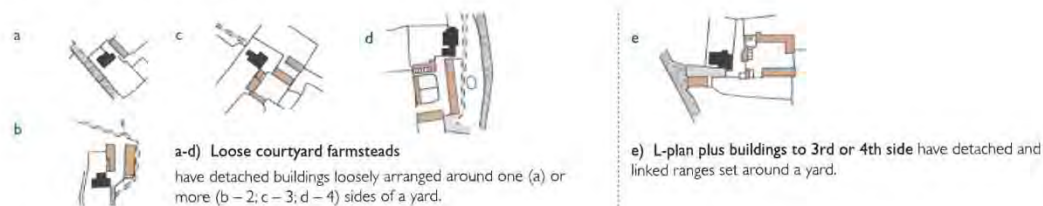
Confidence	H M L	High Medium Low
Area	Rapid polygonal capture of the area of the farmstead, capable of analysis after an area mapping project has completed	
Notes	Free text field to add notes relating to the character or identification of a record or confidence score	

Farmstead yard layout plans

NATIONAL FARMSTEADS CHARACTER STATEMENT

These drawings show the full range of farmstead plans which are encountered across England.

Courtyard plans are the most common forms of farmstead layout, where the working buildings are arranged around one or more yards. The largest courtyard farms are found on high-status sites, estate farms and in the arable vales, wolds and downlands of England, and the smallest in stock-rearing and dairying areas. Cattle yards either developed as areas for treading straw from the threshing barn into manure, or – especially in upland areas – an area for moving cattle and storing the manure. They may have scatters of other farm buildings relating to routes and tracks, usually cart sheds and other ancillary buildings.

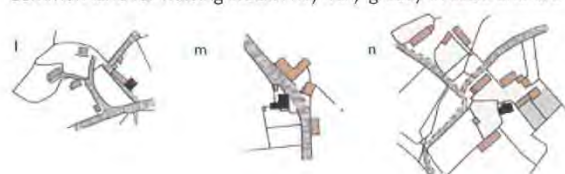


f-k) Regular courtyard farmsteads

consist of linked ranges formally arranged around one or more yards:

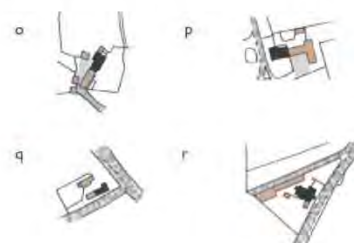
- L-plans (f) which are typically small-medium in scale and have the buildings arranged as two linked ranges to create an L-shape.
- U-plans (g) which are medium-scale farmsteads, sometimes larger, with buildings arranged around three sides of a yard, which is open to one side.
- F-, E-, T-, H- or Z-shaped plans (h and i) which are arranged around two cattle yards.
- Full courtyard plans (j) which have working buildings around all four sides of the yard.
- Multi-yard plans (k) which have multiple yards grouped together and regularly arranged.

Dispersed plans have no focal yard area and the working buildings are dispersed along a routeway or within the boundary of the farmstead. They are concentrated in upland and wood pasture landscapes including areas close to common land for holding stock. They vary greatly in scale and are often bisected by routeways and public footpaths.



- l) dispersed clusters where the working buildings are dispersed within the boundary of the steading.
- m) dispersed driftways which are dominated by the routeways to them, and which often served to move stock from one farming zone to another.
- n) dispersed multi-yards, which are large-scale farmsteads containing two or more detached yards, often with other scattered buildings.

Linear and other farmstead types are most closely associated with upland and common-edge farmsteads.



- o) linear farmsteads, where the houses and working buildings are attached and in-line, or have been extended or planned with additional working buildings to make an L-shaped range (p). They were either built in a single phase or have developed and extended in a piecemeal manner; and from the medieval period many were incorporated within larger farmsteads as they expanded into courtyard or dispersed plans.
- q) parallel plans where the working buildings are placed opposite and parallel to the house and attached working buildings with a narrow area between. They have often developed from linear farmsteads.
- r) row plans, often medium as well as small in scale, where the working buildings are attached in-line and form a long row.

The majority of the fields describe variations in the layout of the farm. The fields were filled using the range of farmstead plans identified in the National Farmsteads Character Statement (Lake 2014, 10).

The completed table was submitted to the Gwynedd Historic Environment Record.

4 RESULTS

This year's survey covered approximately 780 square kilometres and generated a total of 1,556 polygons. The survey added 1,229 farmstead polygons, 104 smallholdings and 223 outfarms. This included full characterisation of the farmsteads within all 25" map squares that fall within the Gwynedd Archaeological Trust boundary area ([Figure 01](#)).

4.1 Study Area

The study area in the 2024-2025 survey spans three National Landscape Character Areas (NCLA), these are Arfon (03), Snowdonia (06) and Conwy Valley (07), and includes three Historic Landscape Characterisation areas (HLC): Caernarfon and Nantlle, Arfon, and Arllechwedd and Creuddyn. The main urban centres within the study area are Caernarfon, Bangor, Llandudno, Conwy and Deganwy.

4.1.1 Arfon

The Arfon area is a gently rolling coastal plateau, bordered by the Menai Strait on one side and the foothills and glaciated valleys of Eryri (Snowdonia) on the other. It stretches from Bryncir in the south to Penmaen-bach Point in the northeast, encompassing the urban centres of Caernarfon and Bangor. Historically, it was home to notable gentry estates like Penrhyn, Faenol, and Glynllifon. The Arfon coastline features shingle, beaches, and dunes along Caernarfon Bay, with extensive mud and sand flats in Foryd Bay and Traeth Lafan. The land is primarily pastoral, with wooded valley slopes by rivers and the Menai Strait. The lowland areas are sheltered and wooded with open pastures, while the upland fringes are exposed and heavily grazed. Settlements are strategically located, often found near river mouths, ports, coastal defences, and where upland valleys meet, as well as near slate quarries.

4.1.2 Snowdonia

Snowdonia is a vast rural upland region dominated by mountain ranges, including the highest peak, Yr Wyddfa. Other notable ranges include the Carneddau and Glyderau in the north, and the Rhinogydd and Cadair Idris in the south. The landscape is defined by striking glacial features such as sharp ridges, cirques, cliffs, lakes, waterfalls, rivers, bogs, and u-shaped valleys carved through the rugged terrain. The uplands are used for hill sheep grazing, forestry, moorland, blanket bog, and grassland, with frequent rock outcrops, slate, shale ridges, and scree slopes. The area is sparsely populated, with settlements mainly in the valleys, including small towns like Dolgellau, Bala, and Blaenau Ffestiniog, as well as villages like Beddgelert and Betws-y-Coed. Similarly, transportation routes are largely restricted to valley floors and connected by mountain passes.

4.1.3 Conwy Valley

The Conwy Valley is a deep, fault-guided glacial valley with significant floodplain and estuary areas. It is flanked by the steep wooded slopes of Snowdonia to the west and the gentler Rhos Hills to the east. The valley has three distinct sections. In the southern part near Betws-y-Coed, steep, wooded hills surround a broad, flat valley floor, which serves as an active floodplain for the intertidal estuary, with areas of hay meadows and reed beds. In the middle to northern section, the estuary meanders through hills, covering much of the valley floor. The surrounding hills are a mix of woodland and pasture, giving way to upland mountains to the west. This area includes small villages, with Bodnant Garden located near Eglwysbach. Settlements are mostly on the lower valley sides, including Dolgarrog, Trefriw, and Glan Conwy, while the main urban centres are Conwy and Llanrwst. Toward the estuary's mouth are Conwy, Llandudno Junction, and Deganwy, all connected by roads and railways to Chester, Holyhead, and Blaenau Ffestiniog.

4.2 Historical Background

4.2.1 Prehistory

Archaeological evidence suggests that farming in the study area dates as far back as the Neolithic period (c. 4000–2000 BCE). There is substantial evidence for prehistoric origins to many field patterns in the study area, including marginal parts of the sea-facing slopes between largely unenclosed uplands and lowlands in the Arfon area, as well as the uplands of Snowdonia and in Conwy Valley. It is suggested that early inhabitants practiced basic forms of agriculture, where crops such as barley and wheat were cultivated alongside animal husbandry, particularly cattle and sheep, which were well-suited to the area's upland and coastal environments (Lynch 1995). Settlement particularly during the early stages of farming, were dispersed and consisted of isolated farmsteads (ibid.). During this period, these early farmsteads were likely small-scale and family-run, relying on basic tools and a mix of arable farming and pastoralism. The Bronze and Iron Ages saw further development in farming techniques, with the construction of more permanent settlements and field systems, including hillforts that provided security for agricultural communities (ibid.).

The earliest settlements in the region consisted of small, scattered hut circles built with local materials such as stone and timber with associated field systems comprising of stone-built walls creating circular or sub-circular patterns across the landscape. These settlements were often located on elevated sites or near water sources, reflecting the needs of early farmers for defensive positions and reliable access to water. Examples in the Arfon area include those on the slopes below Mynydd Tryfan, especially around Rhosgadfan/Rhostryfan and Mynydd y Cilgwyn, with lower altitude examples around Gadlys and Caerlan Tibot (HLC). Towards Conwy Valley, in the Creuddyn and Arllechwed area, is evidence of extensive remains of settlements and field systems radiating from circular hilltop enclosure, especially notable in the areas around Pen-y-Gaer hillfort and Maen-y-Bardd.

In the upland areas, particularly around Snowdonia, transhumance was practiced by prehistoric farmers. This was a seasonal migration system where livestock was moved between lowland winter pastures and upland summer grazing areas. This would have required temporary farmsteads or hafod (summer dwellings), which were simple structures used during grazing months (Johnson 2002). The practice of transhumance remained a defining feature in the region up until the 16th and 18th centuries, before the advent of the enclosure movement.

The Roman conquest of Britain (43–410 CE) brought new agricultural methods to the region, although its mountainous terrain limited large-scale Roman-style farming estates, or villae, which

were more common in southern Britain. Nevertheless, the Romans introduced improved ploughing techniques and new crops, such as oats and rye, which complimented traditional grain farming. After the Romans withdrew from Britain in the 5th century, agricultural practices in the area continued much as they had during the Roman period, albeit with a greater emphasis on pastoral farming, particularly sheep herding, which became central to the local economy (Davies 1990). However, much of the upland areas remained focused on pastoral farming, particularly sheep and cattle, which thrived in the region's rougher terrain.

4.2.2 Medieval

The medieval period was a transformative time for agriculture in the region. Following the Norman Conquest of England in 1066, and later the Edwardian conquest of Wales in the late 13th century, the region saw the introduction of the manorial system. Under this system, much of the land was controlled by the Crown, Church or local lords, and tenants farmed small plots in return for rent or service. The introduction of open-field systems, combined with innovations such as crop rotation and the use of animal manure as fertilizer, improved productivity. Sheep farming expanded dramatically during this period, driven by demand for Welsh wool, which was highly prized in European markets (Carr 1982).

Evidence of medieval quilllets in the Caernarfon and Nantlle area is minimal, although some farms preserve medieval township names like Prysgol, Rug, Cororion, and Botondreg. Early estate maps, particularly those of the Penrhyn estate from 1768, depict the landscape shortly before significant changes under the estate's improving landlords. By comparing these maps with those from 1840–1841, one can observe the drastic transformation of the landscape, with the irregular field patterns around Penrhyn and Llandygái being replaced by larger, more organized holdings and an emparked demesne.

Tithe maps for Llandudno, Eglwys-Rhos, Llangwstenin, Dwygyfylchi and Gyffin show large number of areas of relict strip fields in lowland areas around farms or scattered settlements which have retained medieval townships in their names. However, mostly have since been removed by either settlement development or agricultural improvements (HLC).

The construction of fortified castles, such as Denbigh Castle and Ruthin Castle, during this period also played a role in the development of farming. These castles served as administrative and military centres, around which market towns grew, facilitating trade in agricultural products like grain, wool, and livestock (Smith 1984).

During this period, the typical medieval farmstead in the region was a longhouse or a long hut or a derivative of it, a building where the family and livestock shared the same structure, separated by a partition wall. These farmsteads were built using locally sourced materials, including stone walls and thatched or slate roofs. The longhouse was well-suited to the climate, as it provided warmth from the animals and reduced the need for multiple structures (RCAHMW 1982). In some areas, the medieval long huts may well have had Neolithic origins, suggesting a sense of continuity, such as in the area of Maen y Bardd (HLC).

The uplands and areas near Snowdonia during the medieval period continued to be used as hafodydd, the seasonal movement of stock from lowlands in winter to higher pastures in summer as the rugged terrain of the region were better suited to pastoral farming than arable, leading to a strong focus on sheep farming. This focus on sheep rearing remained a defining feature of farming in the region, with the development of small, scattered farmsteads that were closely tied to the upland pastures (Williams 1984). In these more isolated areas within the region, farmsteads remained modest in size, while fields were often laid out in irregular shapes, defined by dry stone walls or earth banks, which remain characteristic features of the region's landscape today.

In the Conwy Valley area for example, the mix of low-lying meadowland and pasture leading to sheepwalks meant that farms were often made up of both hafodydd and hendrefi (lowland) holdings. While the upland was characterised by isolated farmsteads functioning as seasonal dwellings, the lowland holdings consisted of permanent well-built farmhouses (HLC).

4.2.3 Post Medieval

The 16th to 18th centuries saw significant changes in land ownership and farming practices in the region which saw to the gradual transformation of the landscape due to the enclosure movement. The dissolution of the monasteries under Henry VIII led to the redistribution of church lands, while the rise of enclosure acts across Britain transformed the landscape. Enclosure refers to the legal consolidation of small, fragmented strips of farmland into larger, more cohesive units, often owned by a single landowner or tenant farmer. This movement allowed for more efficient farming practices and resulted in the construction of more isolated farmsteads. Enclosure allowed for more efficient farming and the consolidation of smaller plots into larger, more productive farms. During this period, tenant farmers became increasingly independent, with many securing long-term leases or purchasing their land outright (Morgan 1981).

The process of enclosure and the time that it took to be enforced, varied within the regions. In the Conwy Valley area, there is documentary evidence for the permanent occupation in the uplands

because of encroachment (HLC). Research on the parishes of Llanbedr y Cennin and Caerhun realised that the process of enclosure in the uplands was as a result of successive stages of encroachment on open pasture beginning with seasonal settlement documented from the sixteenth century, but likely older in origin, because by 1468 the upland settlement of Maeneira may already have been in permanent occupation (Ibid). Smaller areas were enclosed later such as the hillside slopes of Alltwyllt, which were settled by the 1770s, and by the nineteenth century these tiny houses and their associated plots of land were home to a working-class population. The limestone ridge of Bryn Pydew similarly was common land which was enclosed in the nineteenth century. Both areas still retain the irregular, small field patterning which testifies to these events (Ibid).

During this period, many medieval farmsteads were either abandoned or rebuilt as more substantial, isolated stone-built houses, reflecting greater permanence and prosperity. For example, in the valleys of the Afon Dulyn and Afon Porth Llwyd in Conwy Valley, the enclosures led to the development of permanent dwellings on the sites of the medieval hafodydd. These new farmsteads often included separate barns and outbuildings, which replaced the traditional longhouse format. For example, barns and byres (cattle shelters) were increasingly built away from the main dwelling, reflecting advancements in farming and animal husbandry (Morgan 1981). The farmstead layout became more organized, with specific buildings for different purposes, such as granaries, stables, and haylofts.

Farmsteads during this time were also influenced by improvements in agricultural techniques, including better crop rotation and the introduction of new machinery, which allowed farmers to cultivate larger areas of land. However, the rugged topography of much of the region, meant that many farms remained small, with sheep farming dominating due to the suitability of upland areas for grazing.

The agricultural history of the study area reflects the strong influence of powerful landowning families, notably the Wynnes of Glynllifon and Newborough. Archival records, including maps and estate papers, provide extensive insight into the Arfon area's development, especially regarding small farms, which were common in the 18th and 19th centuries. Settlements like Moel Tryfan, Nebo, and Waunfawr saw the rise of cottages and smallholdings, driven by population growth and demand for labour in the slate industry (HLC).

Isolated farms persisted, particularly in the upper Nantlle Valley, including areas like Ffridd, Gelli Ffrydiau, Talmignedd, and Drws y Coed. These farms retained the boundaries seen on late 18th and early 19th century estate maps, although the existing farmhouses date largely from the 19th

century. Dispersed settlements included both farmsteads and higher-status houses, among the most prominent was Glynllifon, which held political and economic influence. The estate was imparked in the 1830s, which led to the demolition of smaller farms. In higher-altitude areas, such as Moel Tryfan, settlements of smallholdings and crog-lofftydd cottages are evident. These dwellings, sometimes extended and including beudy (cattle sheds), developed in response to social and economic pressures during the 19th century. Short terraces of two-up-and-two-down cottages, likely built by cottagers with limited capital, also appear in areas like Tal y Sarn. Village settlements centred around churches, such as Llandwrog, Dinas-Llanwnda, and Llanllyfni, are also common. These settlements likely have early Christian foundations, as their churches have Celtic dedications, but they took their current form in the 19th century. Llandwrog became an estate village under the patronage of the Lords Newborough of Glynllifon, with distinctive estate architecture and a substantial church designed by Kennedy. Dinas-Llanwnda grew due to its location at a transport junction, and Llanllyfni developed as a dormitory village within the Nantlle slate quarrying area.

The agricultural landscape of the Arfon region is deeply rooted in historical developments from the late 18th to the mid-19th centuries. This period saw significant changes due to industrialization, enclosure acts, and proactive land improvements by the gentry. Large estates like Vaynol and Glynllifon played pivotal roles in reshaping the land through rebuilding estates and establishing distinct estate styles for farmhouses and buildings.

The Penrhyn estate played a significant role in the enclosure of mountain lands in Llanllechid and Llandygái parishes, leading to long-standing controversies that culminated in the late 19th century. In the late 18th century, the estate began to claim mountain areas like Moel y Ci as its own, particularly after the Penrhyn Quarry expanded onto common land. By the Napoleonic period, the estate encouraged quarrymen to cultivate potatoes on Mynydd Llandygái, and later developed a distinctive pattern of estate dwellings there.

The Vaynol estate underwent equally significant changes, as evidenced by 1777 surveys that offer insight into the development of agricultural practices. The estate's 1869 maps reveal regular enclosures in some areas, possibly indicating deliberate policy, while other sections show wandering walls that may represent either pre-modern settlement or squatter encroachments prior to the parliamentary enclosure of 1808. This enclosure greatly benefited the Vaynol estate. Quarrymen's smallholdings on the commons were confirmed and maintained by Thomas Assheton-Smith III, who aimed to prevent the emergence of landless communities.

Descriptions from the late 18th and early 19th centuries highlighted issues such as the quality of farming being linked to the state of fences and problems arising from intermixture of holdings. Recent improvements have transformed lowland areas, but many upland zones retain their historical field boundaries and features.

In the 19th century, the Industrial Revolution had a profound impact on the region's agricultural economy and significant changes in the nature of farming across the region, due to the broader impacts of the Industrial Revolution. As industrialization brought opportunities in slate quarrying and other industries, many rural inhabitants left farming to work in nearby towns. This depopulation of rural areas, combined with the advent of new agricultural machinery, meant that farms had to adapt to lower labour availability, leading to increased mechanization and the further consolidation of farms (Smith 1979). Although the industrial economy in Wales was heavily focused on slate quarrying and coal mining, farmsteads also underwent transformation as the population grew, and new markets emerged for agricultural products.

Many farmsteads were expanded or rebuilt to accommodate new farming practices and technologies, such as mechanized ploughs, seed drills, and threshing machines. Farm buildings became more specialized, with granaries, dairies, and machine sheds becoming common features of the larger farms. This period also saw the widespread use of slate for roofing, replacing thatch, especially in areas close to quarries like those around Caernarvon and Bethesda (Smith 1979).

In the Arfon region, lowland holdings centred around substantial late 19th century farmhouses, this was particularly notable in the Arfon plain, slopes of Snowdon above Llanberis and Nant Ffrancon where these farmsteads incorporated distinctive estate features and were made up of regular enclosures (HLC). In Dyffryn Ogwen, substantial farms and dwellings were built by Penrhyn estate along the pre-Telford road and include Pen Isa'r Nant (dairy farm) and Dol Awen, both of which were gentry houses (Ibid.).

In the Conwy Valley region, many farms housed miners or quarrymen, indicating a dual economy that helped some farms survive until the late 19th century. By the 20th century, some farms were operated part-time as families combined farming with industrial work (HLC).

Despite these advancements, many farmsteads in the region remained relatively small, and tenant farmers faced pressures due to rising rents and fluctuating agricultural prices. The upland regions continued to rely heavily on sheep farming, which required less investment in infrastructure compared to arable farming.

4.2.4 Modern

In the 20th century, the region experienced further modernization in farming techniques. The introduction of tractors, chemical fertilizers, and more efficient breeds of livestock helped boost productivity. However, the economic pressures of the 20th century, including competition from imported agricultural products and fluctuating prices for wool and meat, led many smaller farms to struggle. The decline in the traditional farming way of life was countered, in part, by government subsidies and efforts to promote sustainable agriculture, particularly in the latter half of the century (Edwards 2003). As a result, there was a decline in traditional mixed farming, and many smallholdings were abandoned or consolidated into larger estates. This period also saw a shift towards specialized farming, with many farms focusing on sheep or cattle, particularly in the upland areas (Ibid.).

Farmsteads themselves became less labour-intensive and increasingly focused on efficiency. New buildings, often prefabricated structures made from concrete and steel, replaced older stone barns, and many traditional farm buildings were repurposed for modern uses. Additionally, many farmsteads diversified into non-agricultural activities, such as tourism, bed-and-breakfasts, and holiday cottages, reflecting the declining profitability of traditional farming.

Today, farming in the region remains an important part of the local economy, though it is increasingly diversified with many farmers engaging in tourism and conservation work, alongside traditional agriculture. The rugged landscapes of Snowdonia and its surrounding areas continue to influence the predominance of sheep farming, though there is also a growing focus on organic farming and local food production in response to changing consumer demands and environmental concerns.

The preservation of the region's cultural and natural heritage has become increasingly important, with many farmsteads adapting to sustainable farming practices that aim to balance agricultural productivity with environmental conservation. In areas like Snowdonia National Park, there is a strong focus on protecting the landscape and maintaining traditional farm buildings as part of the region's historical character.

The present-day agricultural landscape of the study area is a reflection of the transformations and developments of the late 18th and early to mid-19th centuries, including the arrival of large-scale industrialization, the enclosure of large areas, land improvements by the gentry and creation of estate-style farmhouses and farm buildings by the prominent estates of Penrhyn and Vaynol.

4.3 Attribute analysis and distribution

Farmsteads

The most frequent plan type for farmsteads is the loose courtyard (LC) plan (32%) i.e. with detached buildings arranged around one or more sides of a yard ([Figure 02](#)). Of these, 14.1% have working buildings on one side, 14.3% have buildings on two sides, 2.6% on three sides, and 0.5% on four sides. The majority of farmsteads (70%) have detached elements, and 0.5% of farmsteads have a secondary yard.

Regular courtyard (RC) plans account for 19% of farmsteads within the study area ([Figure 03](#)). The leading trend are L-shaped yards that account for 47% of farms within this group type. 20.3% of RC L-shape yards have a building to the 3rd side and 2.5% to 4th side of the yard, and most of have additional detached elements (63%).

A significant trend is the U-shape RC yard that make up 10.2% of the total count for the RC courtyard type, while multiple courtyards account for only 8.9%. Other types of RC courtyards are T-shape (3%), Z-shape (2.1%), F-shape (2%), with rare occurrence of E-shape (1.7%). The majority of these farmsteads (82%) have detached elements to the main yard, of these, only 3 (7%) farmsteads have a secondary yard.

Linear farmyard (LIN) plans make up 19% of farmsteads in the study area ([Figure 04](#)). Of these, only 9.8% have additional detached elements, occasionally there is the addition of a LC or DISP yard (6.4%).

L-plans (LP) constitute 17% of farmsteads ([Figure 05](#)). A small proportion of these (12%) have additional detached elements. Of these, 6% have a LC yard noted as a tertiary attribute.

Dispersed farmyard (DISP) plans account for 12% of farmsteads i.e. farms with no focal yard ([Figure 06](#)). Of these, 26% have multiple working yards, 58% are dispersed driftway yards dominated by the routeways to them, and 16% are dispersed clusters with the buildings spread around the boundary of the farm. A regular occurrence is the LC yard as the tertiary element in the dispersed multi-yard and driftway yards.

Other farmstead layouts have been recorded although all are uncommon. These are covered plans and other plan types (0.8%; [Figure 07](#)) and parallel plans (0.1%; [Figure 08](#)).

Smallholdings account for 7% of the total survey data (n=104; [Figure 09](#)). Majority of smallholdings are linear plans (40%), this is followed by loose courtyard plan (25%) and the L-plan yard (18%). A high number of LC courtyards (20%) had a farm building on one side of the yard.

A little less than half of farmsteads (39%) measure less than 0.10 hectares, with the majority (43%) between 0.10 – 0.20 hectares in size, and lesser numbers exceeding 0.30 hectares (7%).

Smallholdings commonly measure up to 0.10 hectares (75%), this is followed by those that measure between 0.10 and 0.20 (22%) and with rare instances of ones that are greater than 0.20 hectares (3%).

Outfarms

There is a total of 224 (14%) outfarms i.e. a building or a range of buildings remote from the main farmstead ([Figure 10](#)). These mostly comprise of a single building with or without a yard (54%). Outfarms with two or more working buildings set around a yard make up 45%, LC yards make up 36.6% and a lesser amount are RC plan (8.5%). Other outfarm yard plans (0.8%) include dispersed and covered yards.

The majority (97%) of outfarms measure less than 0.10 hectares in size, with a much less that measure greater than 0.10 hectares (3%).

The distribution of farmsteads and smallholdings in the study area primarily spans on low-lying regions such as valley floors and lower mountain slopes. High concentrations are found on the Arfon plateau, with additional clusters scattered in low-lying fieldscapes across areas like Lleuar and Dinas Dinlle to the south, and Port Penrhyn and Pentir to the north and east of the Arfon area. Other notable locations include the valley floor and upland slopes of Nantlle, the valley floor of Nant Gwynant, the lower slopes of Moel Tryfan, and reclaimed lands in areas such as Cefn Du and Nebo in the southwest, and Gwaen Gynfi to the northwest. Further scattered farmsteads appear southeast of Waunfawr, following the Gwyrfaï valley down to Llyn Cwellyn where they are located to the east on the lower slopes of Moel Eilio.

Within Snowdonia, fewer farmsteads are located south of Betws-y-Coed, aligning along narrow valley corridors and river systems such as Machno valley and Glyn Lledr, and avoiding woodland areas within and near to Betws-y-Coed, as well as to the southwest at Wybrnant Iwerddon and Hafod Gwenllian. This is with exception on the Llugwy southern slopes where some farmsteads are found amid woodlands. Towards the Conwy area, farmsteads are mostly concentrated on the east side of Conwy Valley in the Eglwysbach and Llanddoged area and to the south at Ysbyty Ifan.

4.4 Survival and condition

Survival and condition of farmsteads, smallholdings and outfarms were determined from mapping and aerial photographic evidence.

In general, the survival of farmsteads and smallholdings shown on the 25" map is relatively high with 17% of farmsteads and smallholdings intact with no significant loss of structures, 41% with less than 50% alteration and 11% that have more than 50% alteration. In some cases (6%), the farmhouse is the only surviving element. Lost farmsteads and smallholdings account for 14% as seen on aerial photographs as full or partial ruin. 10% of farmsteads and smallholdings have been demolished, with only a total of 2% (n=32) of properties converted to either a new farm or residential property. Lastly, a very low percentage (<1%) of farmsteads and smallholdings have been converted into holiday lets.

Intact outfarms account for 17.5%, 8.1% with less than 50% alteration, and 1.3% that have more than 50% alteration. A significant amount (48.4%) of outfarms are in a ruin state, with a lower number of outfarms that have been demolished (22%).

5 DISCUSSION

This year's survey (2024/25) followed the methodology established in 2017-2018 to ensure an efficient workflow and make sure that outcomes were compatible with the Gwynedd HER. Historic Farmstead characterisation was completed in the Arfon, Snowdonia and Conwy Valley areas, excluding the Carneddau region as this had previously covered in 2019 (GAT Report No 1502).

Farmstead characterisation is more complex and time consuming than the digitisation of individual buildings, this is due to the manual process. The input table contains 35 fields but 12 of these fields require manual input and the process requires reference to aerial photography, existing records from Gwynedd HER, Cadw listed buildings and RCAHMW. The categorisation process requires confirmation of the current status and condition of the buildings, the identification of the farmhouse, and the allocation of the plan to one of 8 basic plan types and 18 sub-plan types.

The main categories of farmstead plans as defined in the Historic Farmsteads manual (Lake and Edwards, 2017) proved to be readily identifiable although smaller more irregular farmsteads could sometimes be interpreted in more than one way. It was in many cases possible to reliably identify secondary and tertiary attributes such as multi-yards, drift-ways, clusters and numbers of buildings around courtyards. Some of the other attributes appear to require more subjective judgement and could be regarded as being on a continuum of loose courtyard plans.

6 CONCLUSIONS

The present-day agricultural landscape of the study area is a reflection of the transformations and developments of the late 18th and early to mid-19th centuries, including the arrival of large-scale industrialization, the enclosure of large areas, the use of marginal and reclaimed lands for squatter enclosures, land improvements by the gentry and creation of estate-style farmhouses and farm buildings by the prominent estates of Penrhyn and Vaynol.

Results from the attribute analysis and distribution of the study area reveals a diverse range of farmstead and smallholding layouts, with loose courtyard (LC) and regular courtyard (RC) plans being the most common among farmsteads, while linear (LIN) and loose courtyard (LC) plans are chiefly attributed to smallholdings. These layouts, predominantly concentrated in low-lying valleys and slopes, reflect adaptive use of the landscape for agriculture. Farmstead size is generally modest, with most measuring under 0.20 hectares, while smallholdings are even smaller, rarely exceeding 0.10 hectares. Outfarms, mostly single-building structures or LC yards, also contribute to the agricultural landscape, with most being less than 0.10 hectares in size.

The survival rate of these structures is generally high; however, alterations and partial ruin are common, reflecting changes in farming practices and property use over time. Intact structures are relatively rare, especially among outfarms, with nearly half of them in ruin or demolished. The majority of conversions are residential, with very few farmsteads and smallholdings adapted for holiday use. This pattern underscores the historical significance of farmsteads in the region, even as modern pressures impact their preservation and function.

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FIGURE 01

Distribution of historic farmsteads in the 2024 – 2025 survey, scale 1:200,000.

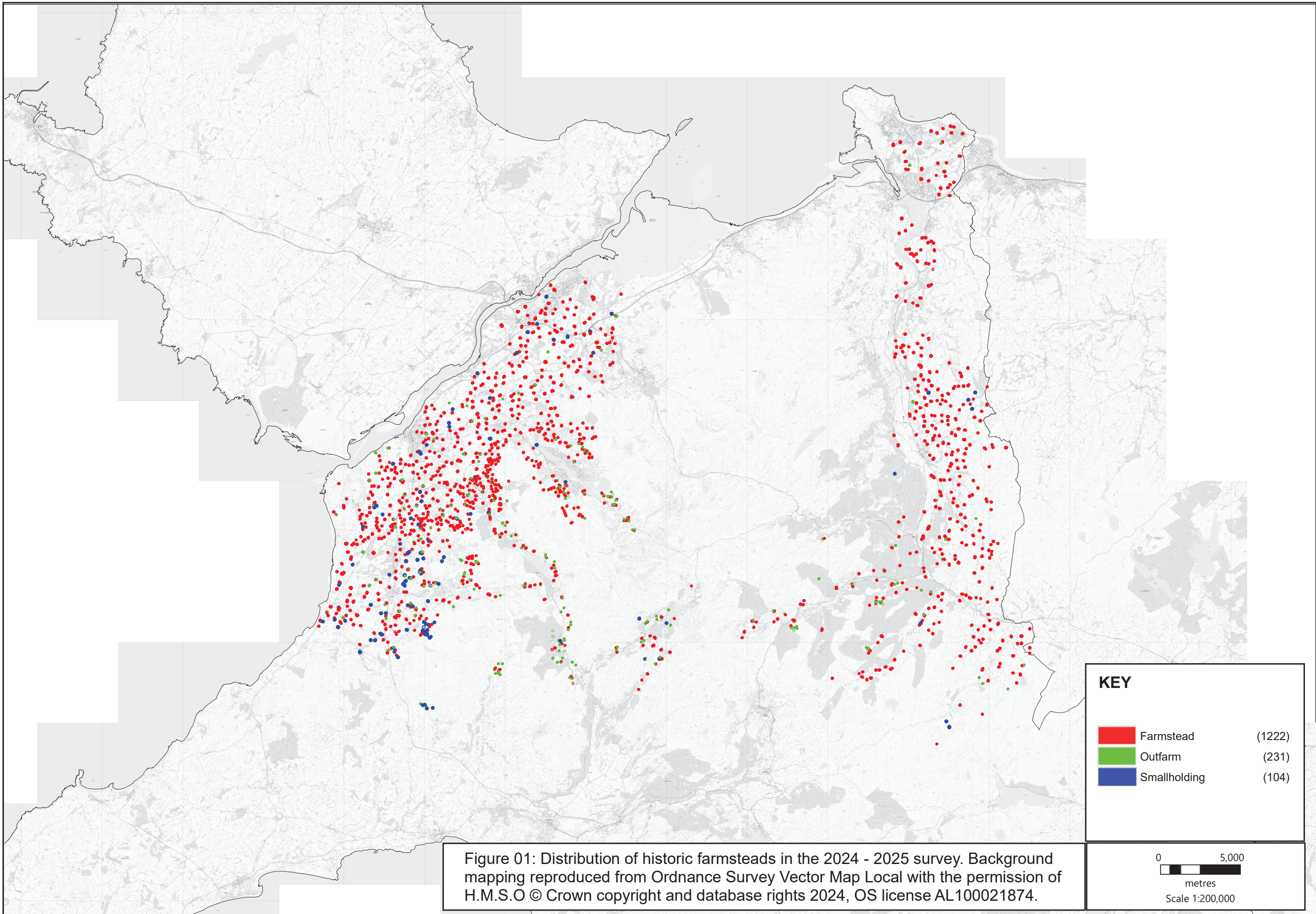


FIGURE 02

Distribution of loose courtyard plan farmsteads and smallholdings in the 2024-2025 survey, scale 1:200,000.

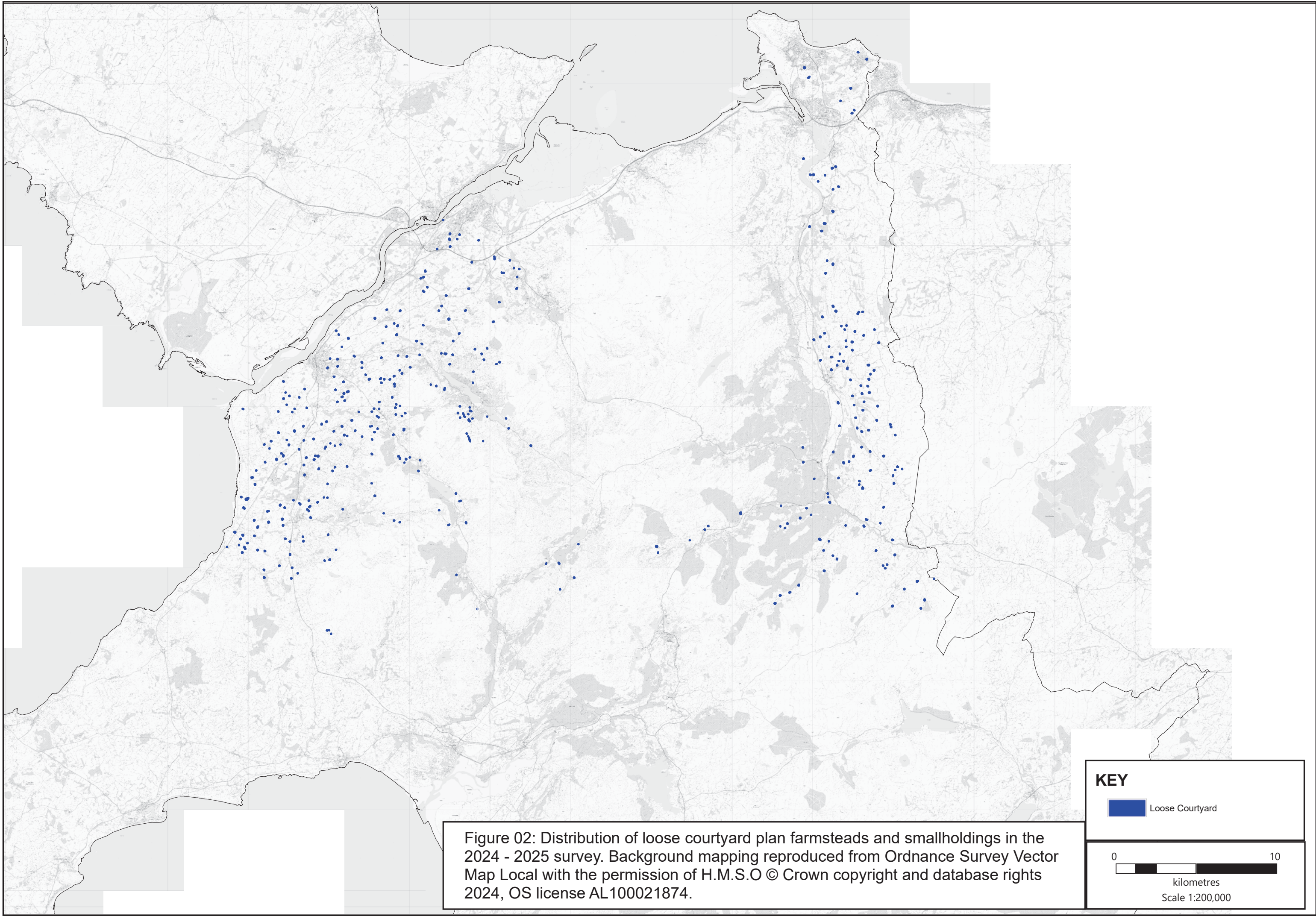


FIGURE 03

Distribution of linear plan farmsteads and smallholdings in the 2024-2025 survey, scale 1:200,000.

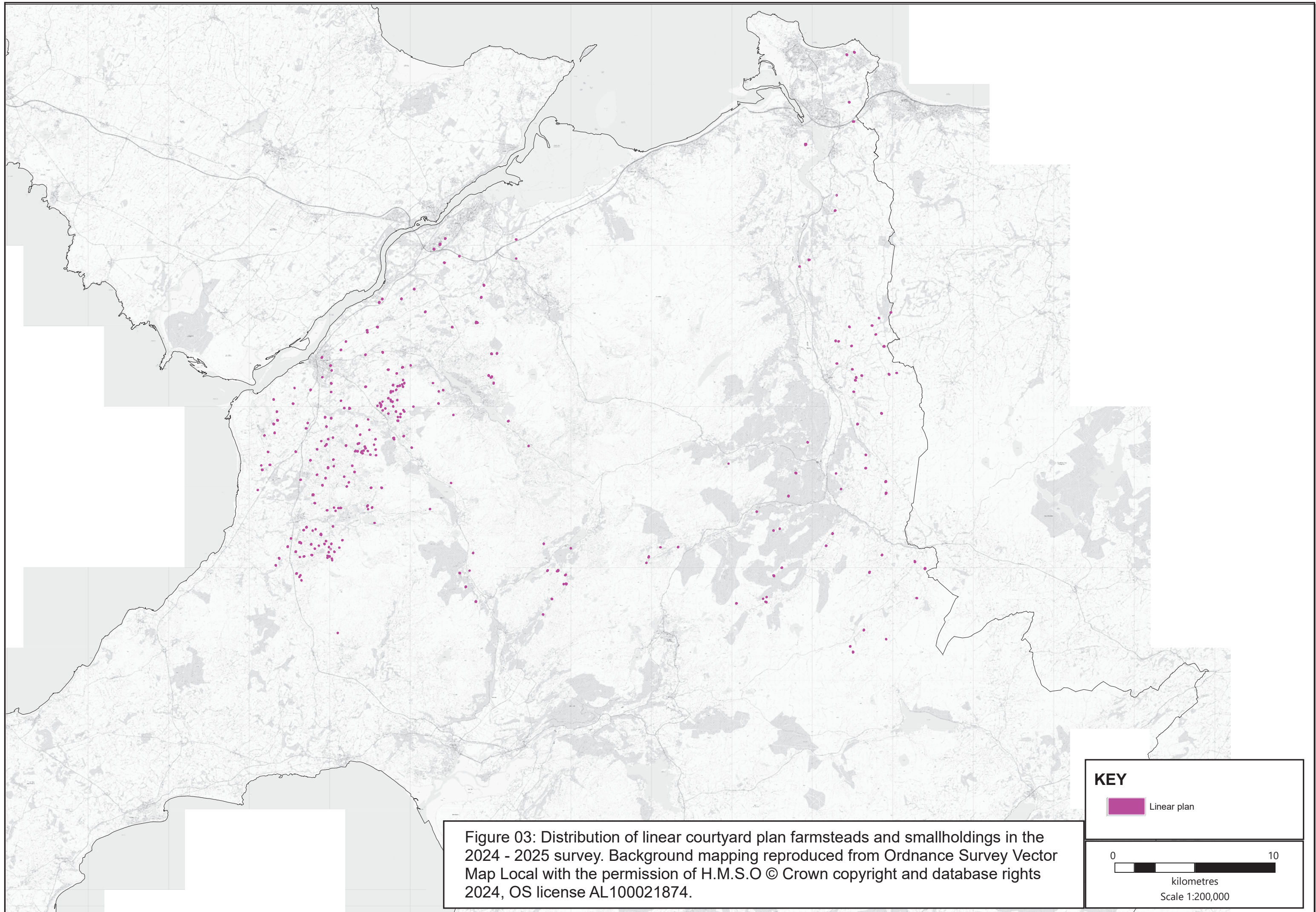


FIGURE 04

Distribution of regular courtyard plan farmsteads and smallholdings in the 2024-2025 survey, scale 1:200,000.

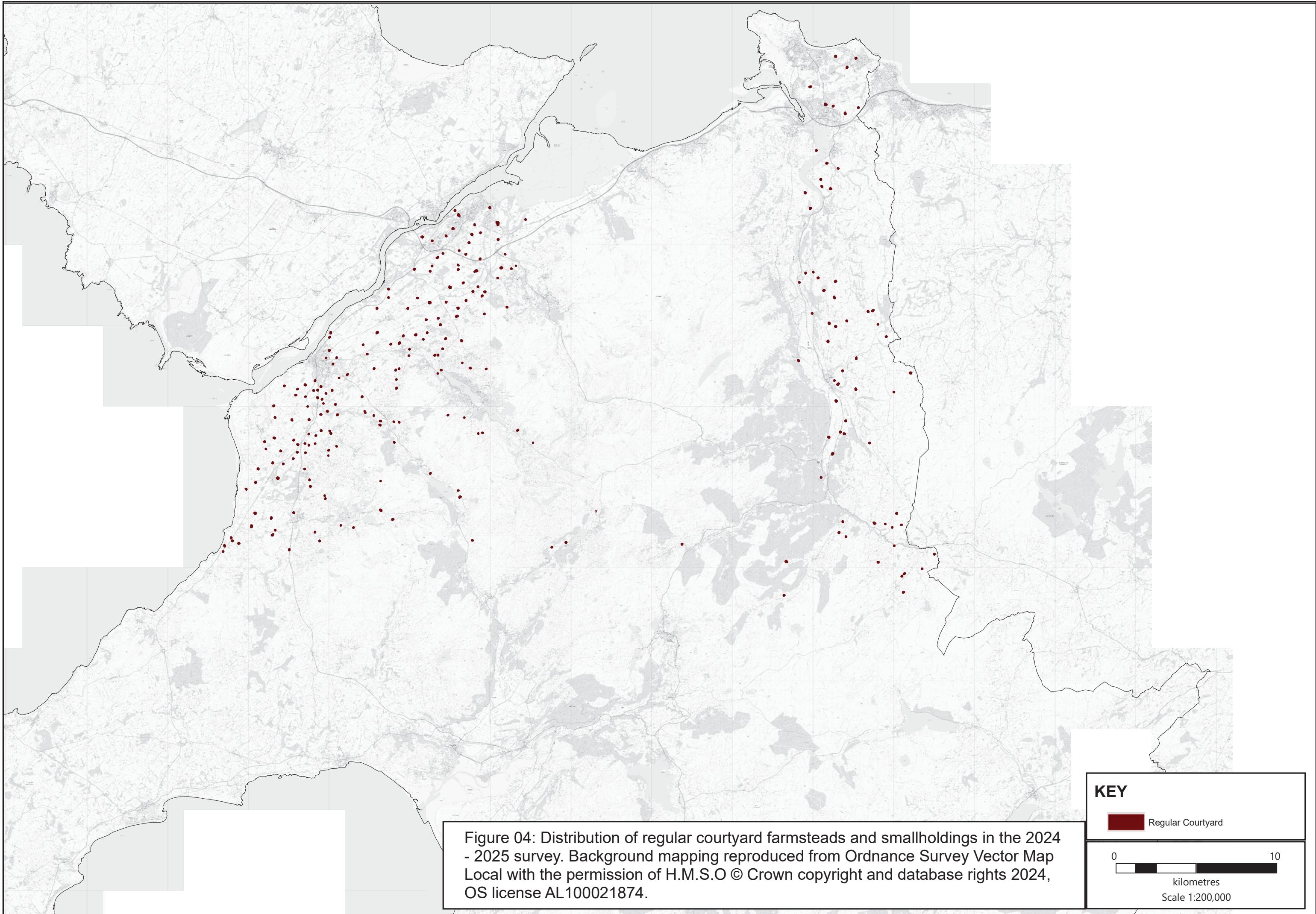


FIGURE 05

**Distribution of L plan farmsteads and smallholdings in the 2024-2025 survey,
scale 1:200,000.**

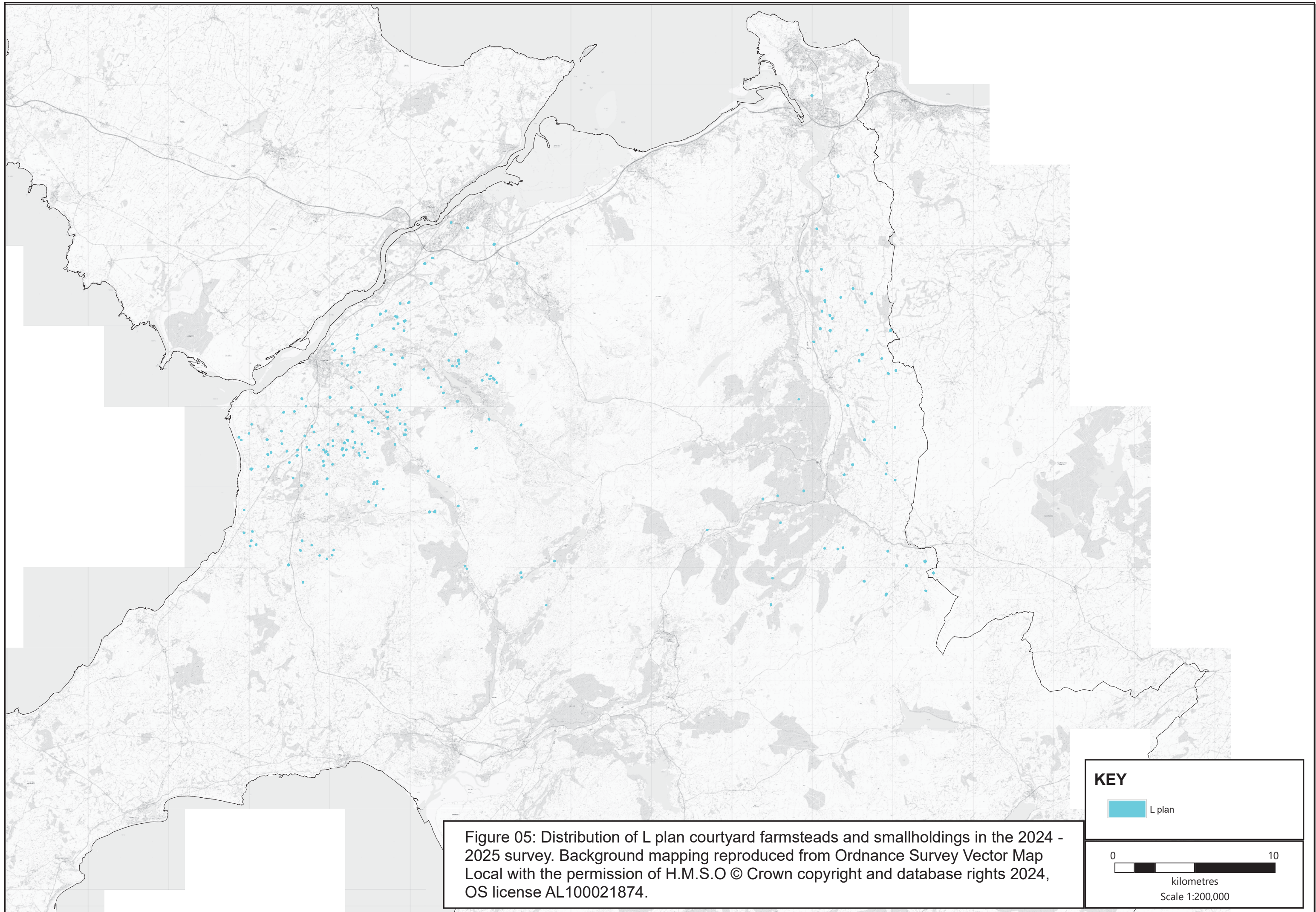


Figure 05: Distribution of L plan courtyard farmsteads and smallholdings in the 2024 - 2025 survey. Background mapping reproduced from Ordnance Survey Vector Map Local with the permission of H.M.S.O © Crown copyright and database rights 2024, OS license AL100021874.

FIGURE 06

Distribution of dispersed courtyard plan farmsteads and smallholdings in the 2024-2025 survey, scale 1:200,000.

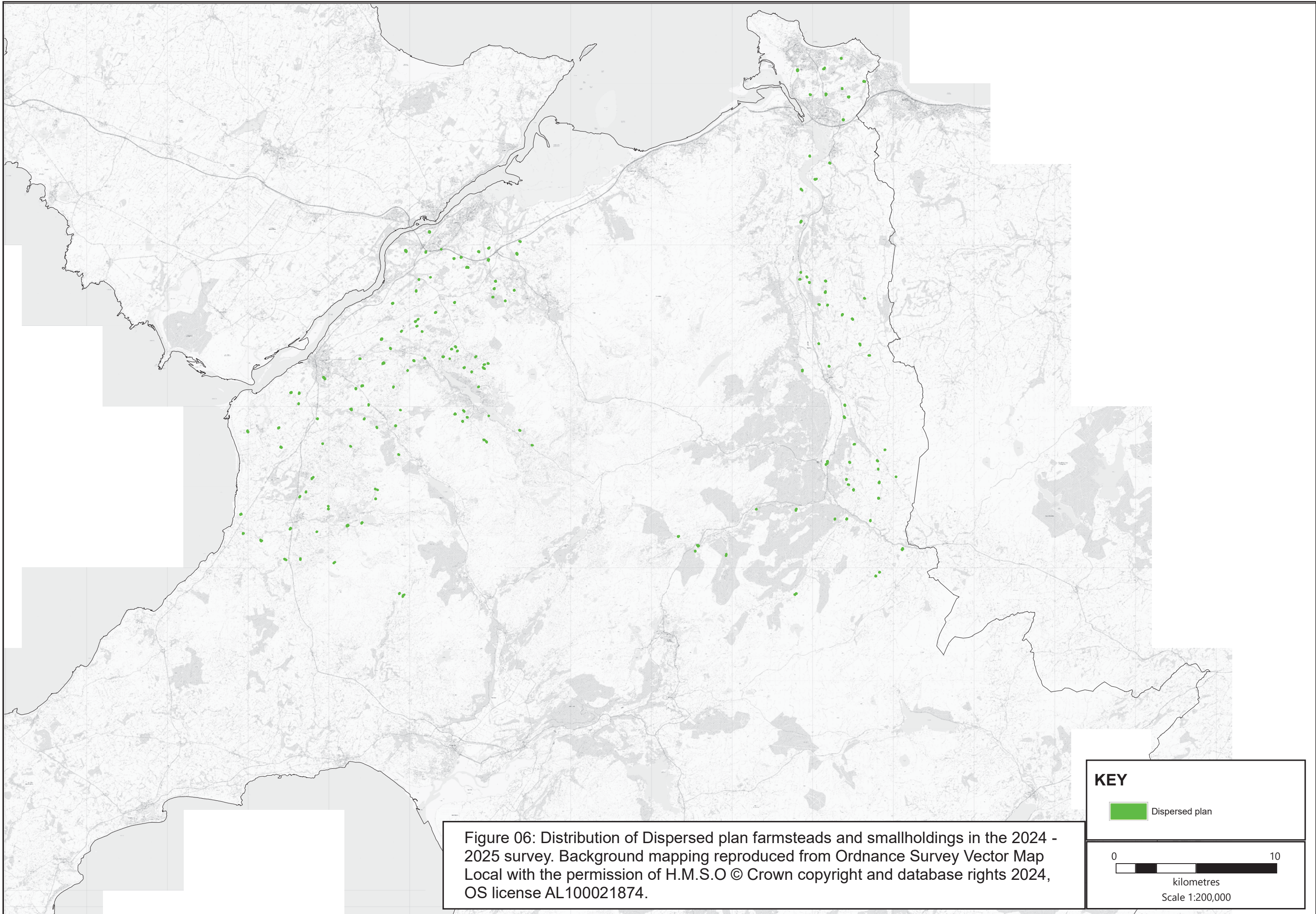



Figure 06: Distribution of Dispersed plan farmsteads and smallholdings in the 2024 - 2025 survey. Background mapping reproduced from Ordnance Survey Vector Map Local with the permission of H.M.S.O © Crown copyright and database rights 2024, OS license AL100021874.

KEY

 Dispersed plan


0  10
kilometres
Scale 1:200,000

FIGURE 07

Distribution of covered courtyard plan farmsteads and smallholdings in the 2024-2025 survey, scale 1:200,000.

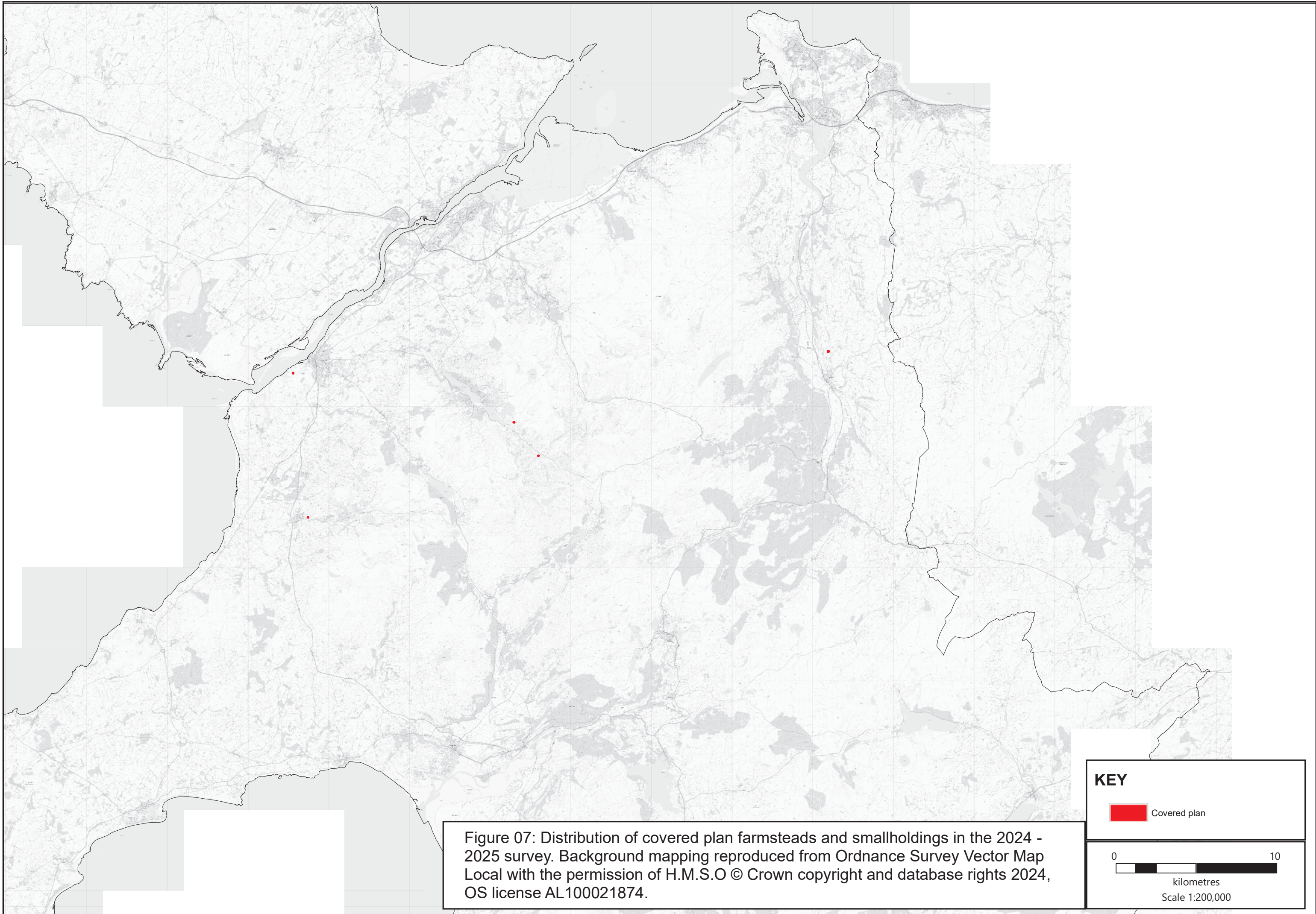


Figure 07: Distribution of covered plan farmsteads and smallholdings in the 2024 - 2025 survey. Background mapping reproduced from Ordnance Survey Vector Map Local with the permission of H.M.S.O © Crown copyright and database rights 2024, OS license AL100021874.

FIGURE 08

Distribution of other courtyard plan farmsteads and smallholdings in the 2024-2025 survey, scale 1:200,000.

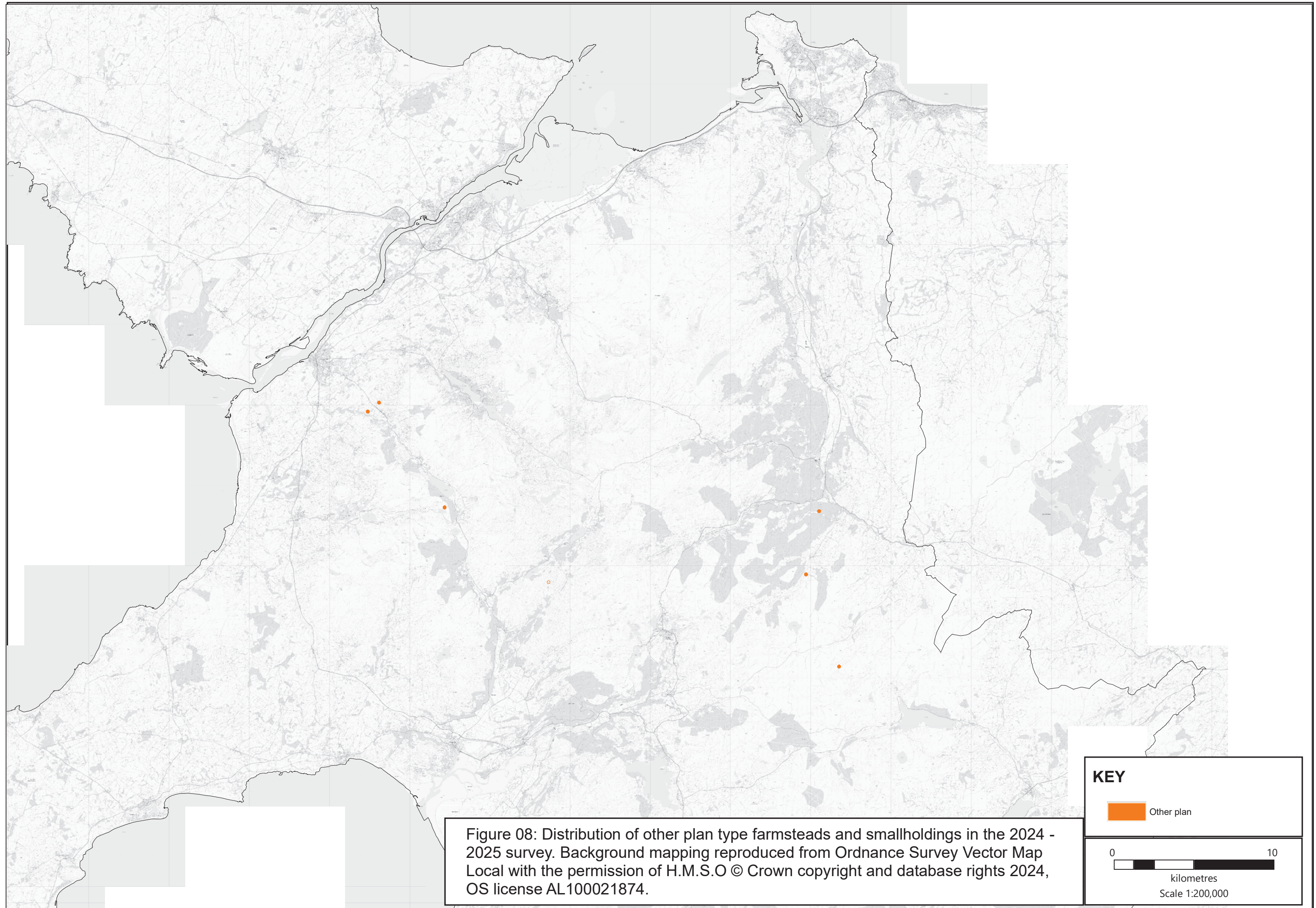


FIGURE 09

Distribution of smallholdings in the 2024-2025 survey, scale 1:200,000.

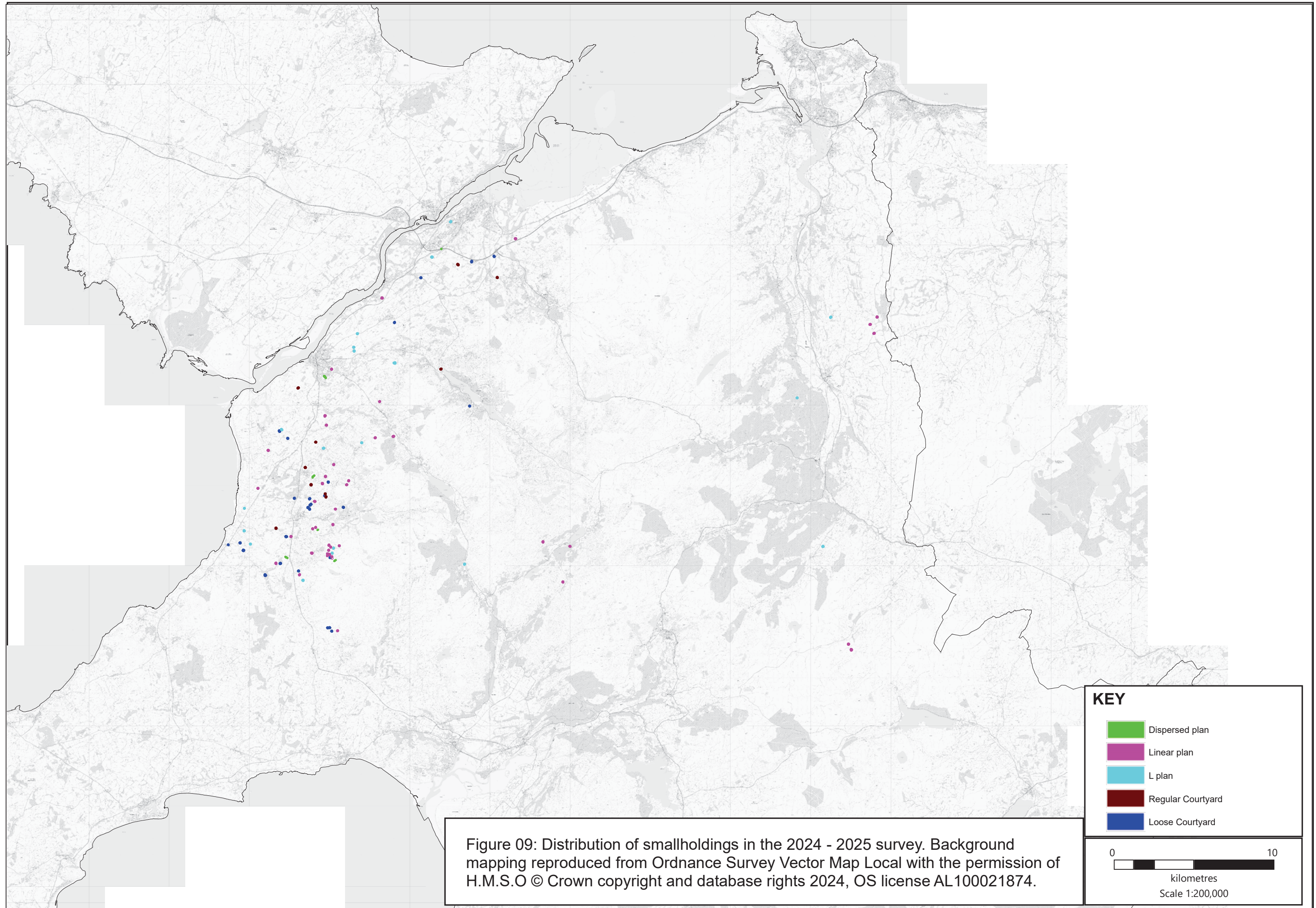


Figure 09: Distribution of smallholdings in the 2024 - 2025 survey. Background mapping reproduced from Ordnance Survey Vector Map Local with the permission of H.M.S.O © Crown copyright and database rights 2024, OS license AL100021874.

FIGURE 10

Distribution of outfarms in the 2024-2025 survey, scale 1:200,000.

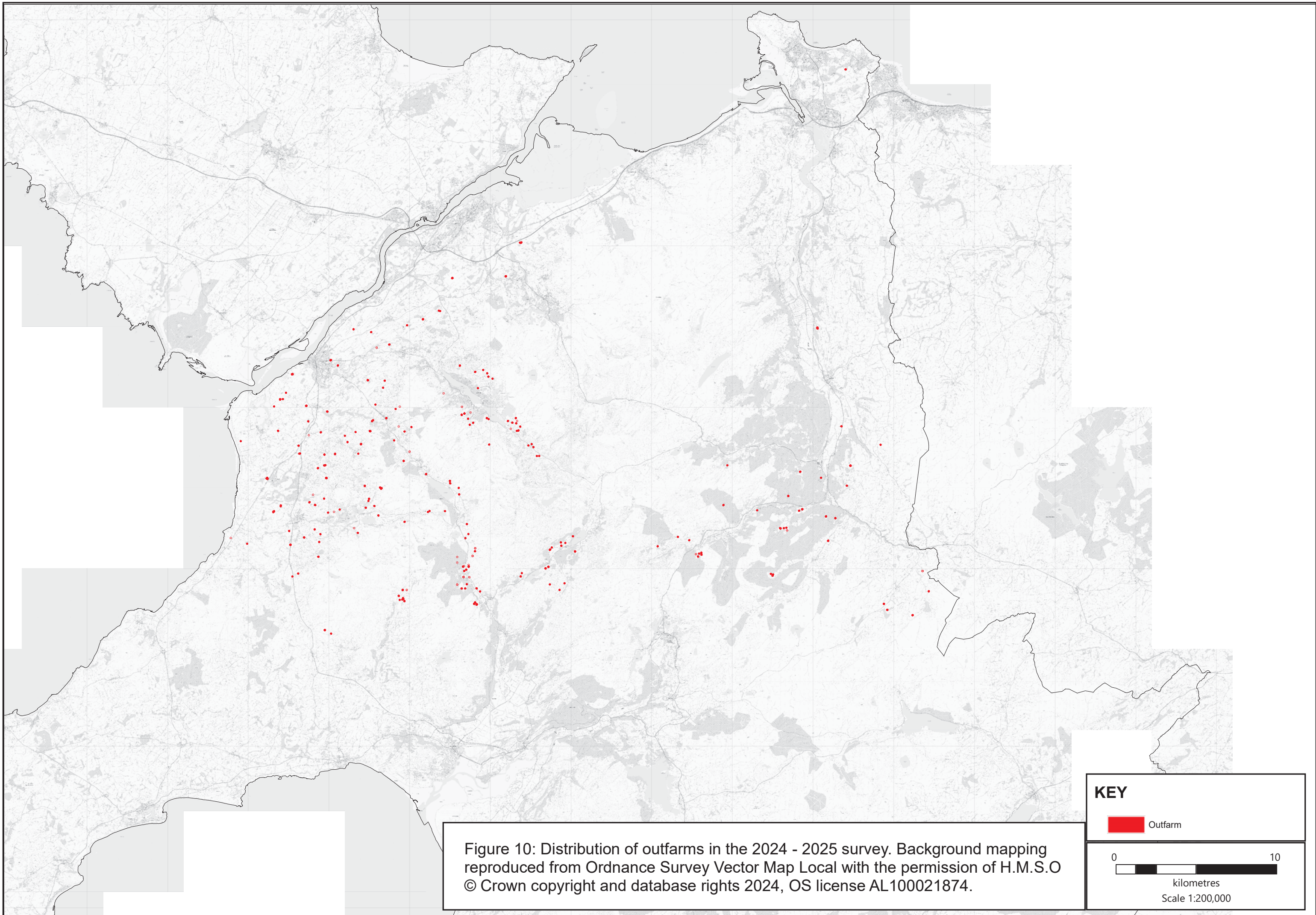


Figure 10: Distribution of outfarms in the 2024 - 2025 survey. Background mapping reproduced from Ordnance Survey Vector Map Local with the permission of H.M.S.O © Crown copyright and database rights 2024, OS license AL100021874.

