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Medieval Markets and Portable Antiquities Scheme Data

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This note is an interim report of the pilot project 'Placing Medieval Markets in their Landscape Context through the Portable Antiquities Scheme Data', initiated by the authors through grants from the Society of Antiquaries of London and the Society for Medieval Archaeology. Our aim is to study the development of medieval markets and other commercial sites through geographic information system (GIS) analysis of the object finds gathered in the Portable Antiquities Scheme (PAS) database. The research project is expected to run from May to autumn 2015 and is hosted by the Portable Antiquities Scheme at the British Museum.

Weekly markets formed a vital economic function by fostering entrepreneurial activity and providing economic access to rural and urban populations alike (e.g. Miller and Hatcher 1995; Masschaele 1997). 2,466 markets have been identified from documentary records by the Institute of Historical Research project 'Gazetteer of Markets and Fairs in England and Wales to 1516' (Letters 2002). Fig. 1 displays the locations of known markets from the project's database, underlain by a kernel density map (r = 16 km, or a day's return journey in Bracton's (1915–42) discussion of market rights *c*. 1235; see vol. 3, 198).

Only a portion of these markets co-existed at any given time. It appears that the oldest and most successful markets were founded relatively early; 78 per cent of the medieval markets in the Gazetteer's database that survived to the Early Modern period (*c*. 1600) had been established by 1300 (Everitt 1968, 468–75; Letters 2002). Already in the late 12th and early 13th centuries, when we first enjoy access to significant numbers of market records, notable clusters have emerged around the intersections of major communications routes, and by points of transfer from one mode of transportation to another. These include intersections of major cross-country roads in eastern Midlands, and of overland routes and navigable waterways in the upper reaches of the Thames and the Somerset Levels. Such regions of unusually intense activity do suggest that many successful and long-lived local markets were integrated into broader networks of interregional and perhaps international exchange, highlighting their key role in the development of the British medieval economy (Oksanen 2015). The major aim of the project is to investigate methodologies for the study of the development of local commercial centres in their regional context through PAS data.

The PAS has been collecting data on archaeological small finds since 1997, and as of 1 May 2015 its online database contained records for 159,031 medieval (1066–1539) finds (see http://finds.org.uk and Lewis 2014). After 'Roman', this is the second largest dataset by period on the PAS database. After cleansing the raw download to remove entries that lacked precise findspot information or where dating to the medieval period was broad or uncertain, a dataset of 144,895 objects in 122,357 finds records was produced. The geographical distribution of these finds is expressed in Fig. 2. Some aspects of the variation in finds densities appear to be explained by historic factors such as demography; it has been shown that the geographical distribution of early Anglo-Norman single finds of coins roughly corresponds to population density figures derived from Domesday Book (Bevan 2012, 496–500; see also Donnelly *et al*. 2014, 53–4). Others, however, are due to modern factors influencing data collection, including the access constraints imposed by build-up areas (e.g. around London), the presence of terrain types or land cover favourable for recovery by metal-detecting, or the relationships local PAS Finds Liaison Officers have with individual metal-detectorists (Robbins 2012; 2013).

Over 99 per cent of PAS finds are made by metal-detecting, introducing a bias in metal finds that is immediately evident in the composition of the database. The medieval dataset contains 506 different object types. The fifteen most common object types, listed in Fig. 3, account for 87.9 per cent of all the objects; by contrast 357 object types have less than 30 entries. It is very noticeable that the two largest object type categories, coins and buckles, account for over 50 per cent of the total.

There is a geographic association between the PAS data and medieval settlements that possessed markets. 23,859 or 19.3 per cent of all medieval finds in England were made within 1 km of a market location recorded in the Gazetteer database, a land area only 5.9 per cent (7747 km^2) of the total area of England (130,395 km^2). A variety of factors undoubtedly influence the recovery of these objects, such as the greater likelihood of metal-detecting being conducted near inhabited areas or sites with good transport connections. This figure is nevertheless remarkable, especially so when access constraints for metal-detecting are accounted for, since only 450 medieval market locations exist outside modern build-up areas as defined by the Office of National Statistics.

There are differences between the compositions of PAS finds near market sites and the total population of all finds. The former is somewhat more varied in terms of the distribution of object types than the average, with the fifteen most common object types accounting for 84.7 per cent of the finds instead of 87.9 per cent. Some objects are much more likely to be found near settlements that had hosted a market, in particular those medieval markets that survived to the Early Modern period. Fig. 4 shows the ten object types whose percentage share of the pool rose the most within 1 km of a medieval market location, as contrasted to their representation in the national pool of finds (object types with less than 90 finds entries were not considered). At this general level of analysis it is difficult to isolate objects associated with markets from those associated with successful settlements and towns in general. Of the 184 PAS finds categorised as badges, for examples, 161 are found within 1 km of a medieval

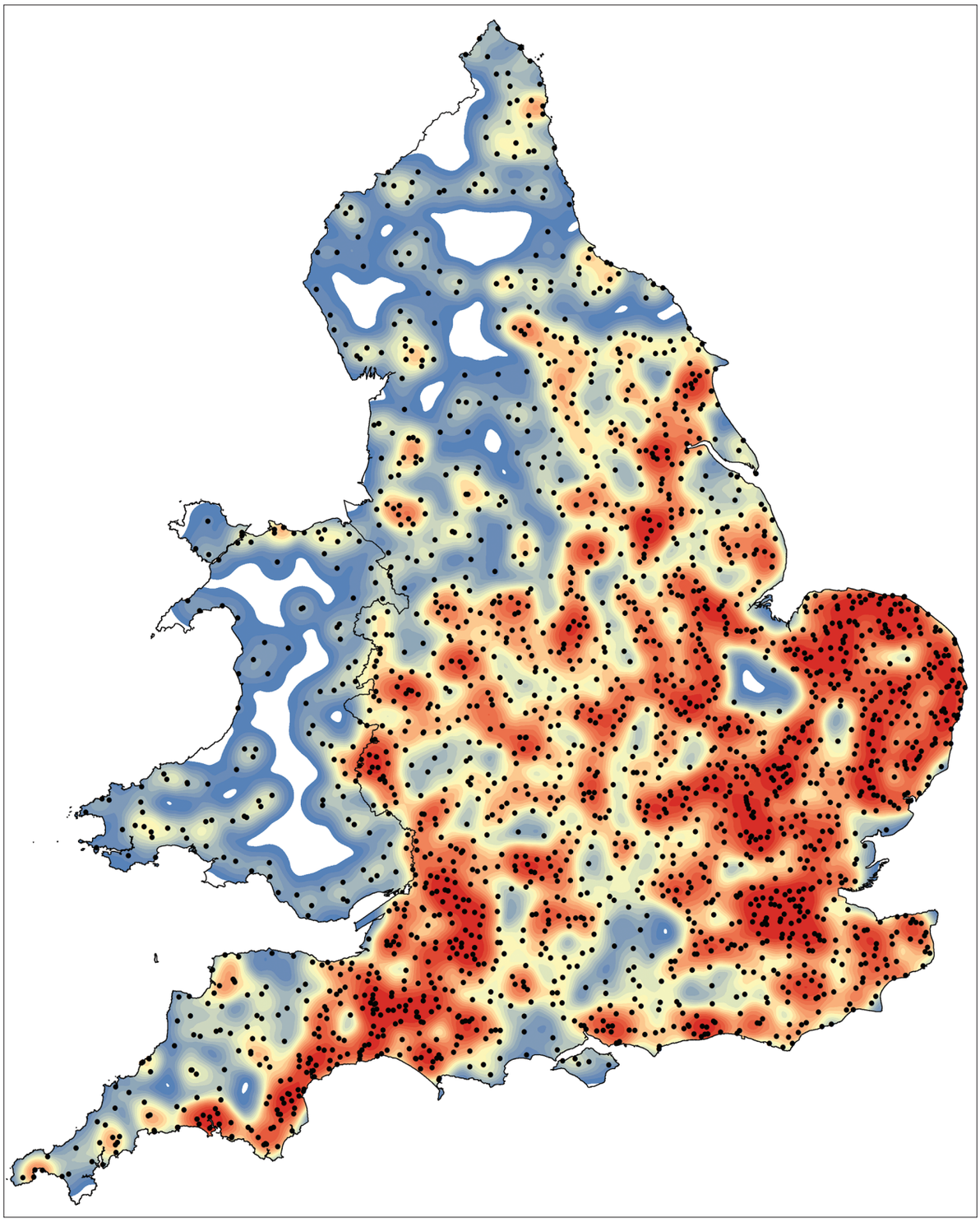

Figure 1 Markets in England and Wales before 1516. Markets are black dots over a kernel density map. (r = 16 km, quantile breaks). Source: Online Gazetteer of Markets and Fairs in England and Wales to 1516.

market site, and of these 149 near a market that survived to the Early Modern period. They may therefore be associated with generally urban rather than specifically market locations. This is nevertheless helpful in terms of understanding the differences in PAS profiles between rural and settled, commercially active sites.

For closer analysis of individual sites and findspot concentrations it is necessary to understand how closely the PAS data is dated. 94.9 per cent of medieval finds entries (116,344 in the cleansed medieval dataset) include 'from date' and 'to date' fields, which for most object types marks the probable earliest and latest date of deposition

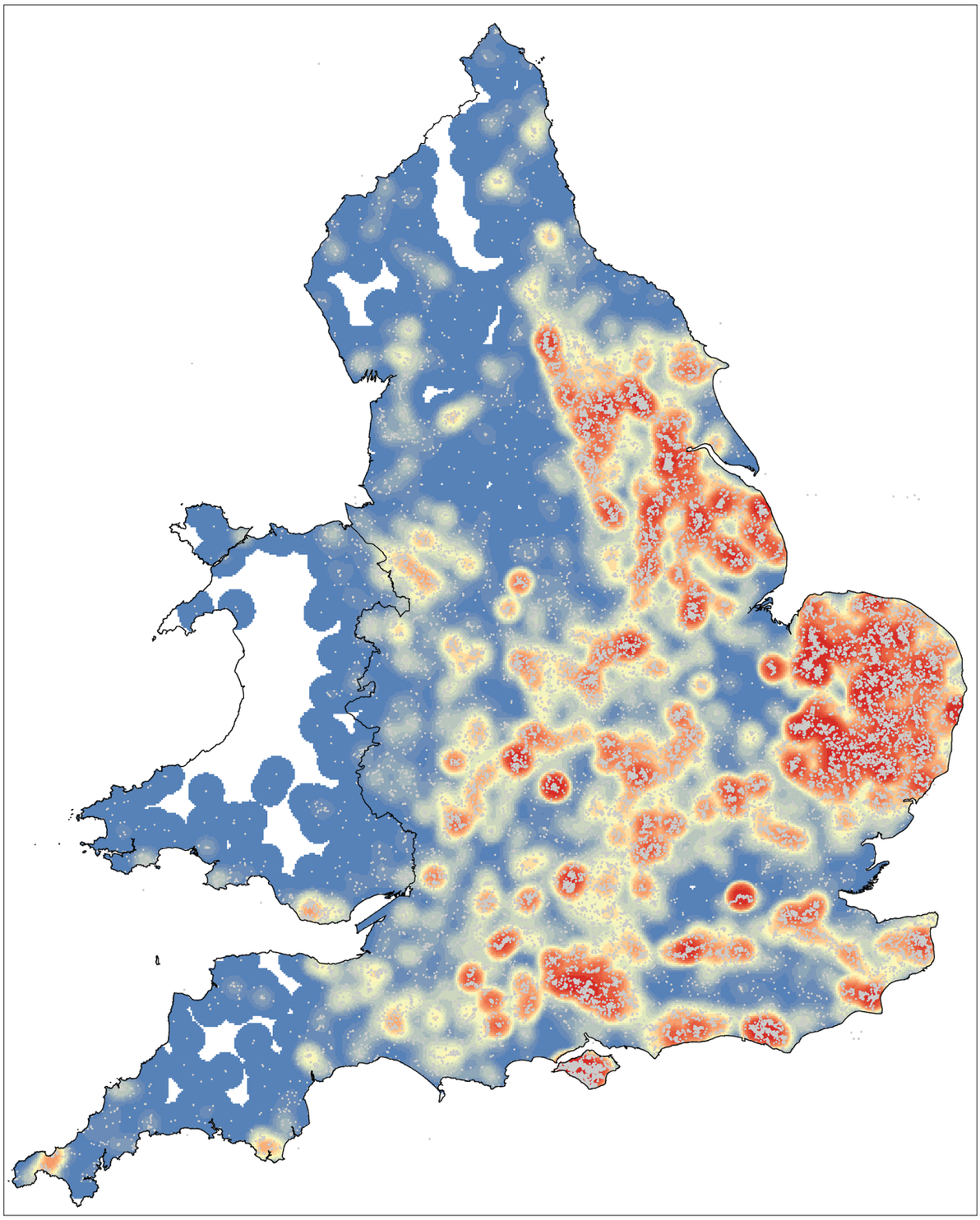

Figure 2 Portable Antiquities Scheme finds for the medieval period, 1066-1516. Grey dots are findspots over a kernel density map. (r = 10 km, quantile breaks). Source: PAS database.

into the ground. Coins, however, are significantly easier to identify and date by their numismatic type or issuing ruler, and their date-range can be taken to indicate the earliest and latest date of manufacture.

We adopted the methodology used by the *Viking and Anglo-Saxon Landscape and Economy* project to examine the chronological breakdown of the medieval material (Naylor *et al*. 2009). The total pool of dated objects was split into coin (44,689) and non-coin (71,655) finds records. As Fig. 5 displays, for non-coins the most significant peaks are at 100 and 200 year date-ranges. 65.8 per cent of all non-coin items have been dated to

Object	Finds	% of Finds
COIN	47362	38.7
BUCKLE	17935	14.6
'STRAP OBJECTS'	9765	8
'HARNESS OBJECTS'	5523	4.5
VESSEL	5305	4.3
MOUNT	4422	3.6
SEAL MATRIX	3940	3.2
BROOCH	2627	2.1
JETTON	2419	2
KEY (LOCKING)	1717	1.4
SPINDLE WHORL	1484	1.2
WEIGHT	1483	1.2
FINGER RING	1313	1.1
AMPULLA	1265	1
THIMBLE	1138	0.9

Figure 3 The most common medieval object types in the PAS database. ('Harness Objects' includes Harness, Harness Fitting, Harness Hook, Harness Link, Harness Pendant, Harness Pendant Hanger, Harness Ring. 'Strap Objects' includes Strap, Strap Distributor, Strap End, Strap Fitting, Strap Fitting/Staff Head, Strap Mount, Strap Slide, Strap Union.) Source: PAS database.

Object	All Medieval Markets	Medieval Markets Surviving to Early Modern Period
BADGE	4.49	11.36
TILE	3.6	7.24
PILGRIM BADGE	3.04	6.73
CLOTH SEAL	2.74	6.39
TOKEN	1.83	2.42
KNIFE	1.53	2.23
PIN	1.53	1.96
BELL	1.29	1.55
VESSEL	1.2	1.46
RING	1.36	1.42

Figure 4 The factor by which object types are more likely to be found within 1 km of a site, contrasted with their frequency in the total pool of objects. Source: Online Gazetteer, PAS database.

at least 200 years, which does show the potential PAS data has for analysing long-term changes in material culture. The coin evidence affords considerably greater chronological precision, as seen in Fig. 6. 49.1 per cent of all coins have been dated to within 10 years of the date of manufacture, and 83.1 per cent to within 50 years.

The PAS database is the only large GIS database that contains numismatic material through the entirety of the Middle Ages in England and Wales. Single finds of coins are particularly useful for examining economic developments both on the national and local scale, on the principle that there is a correlation between the relative number of single finds and the frequency of monetary transactions in a given area (Kelleher 2012, 249–53; Naismith 2013, 200). It has been argued that a system of regular re-coinages every three to six years was instituted in 973 and abandoned by 1125, but that further national re-coinages took place in 1158 – *c*. 1160, 1180–2, 1247–50 and 1279–81. Within a few years these re-coinages had refreshed the coinage in circulation; any single finds from a coin type predating a re-coinage are therefore

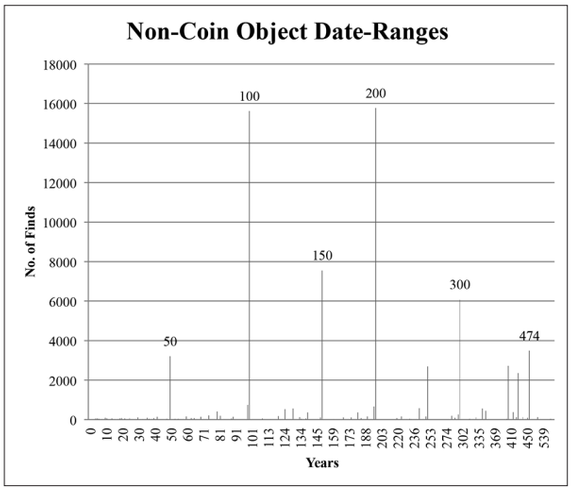

Figure 5 Date-ranges for medieval PAS objects other than coins. Source: PAS database.

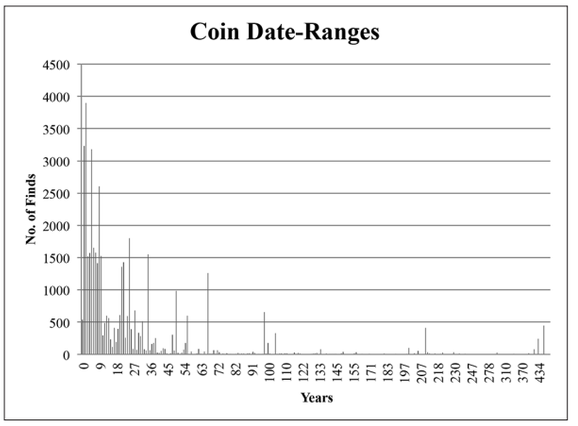

Figure 6 Date-ranges for coins in the PAS database. Source: PAS database.

likely to have been deposited before or soon after the event. The reduction in weight of silver coins in 1351, 1412 and 1464 appear to have had a partially similar result, though hoard evidence suggests that significant numbers of the previous type remained in use a decade after the new lighter type was introduced (respectively a third, two-thirds and 10–20 per cent) (Allen 2001, 597–8, 603–5). While the PAS data indicates the range of the dates of manufacture rather than of deposition, these re-coinage events allow us to contrast the numismatic material between blocks of 20 to 70 years in length until the mid-13th century.

An initial aim of this project was to create a methodology for constructing object profiles for medieval market sites, which could then be applied to identify previously unknown sites. This is made challenging by the fact that most known medieval market sites exist today inside build-up areas and are therefore invisible in the PAS data. Another factor is the relative homogeneity of the PAS data across different finds concentrations (for similar problems in differentiating Roman productive sites, see Brindle 2014). It quickly became apparent to us that examining PAS data in the broader historical landscape context in the vicinity of medieval market sites and transport routes could be adopted as an additional approach.

The fortunes of the port of Wisbech in Cambridgeshire provide an example of how PAS data illustrates historic economic activity. At the time of the Norman Conquest the settlement was located at a strategic position near the juncture of the rivers Nene and Great Ouse. Today the waterway survives only as a straightened roadside drain, but in the Middle Ages and it was through the Well Stream by Wisbech that the various waters of the southern Fenlands gathered and flowed into the sea. From the 12th century it boasted a castle and a market. 430 medieval objects finds have been discovered through metal-detecting just south of the modern town of Wisbech (Fig. 7). The finds are closely associated with the old course of the Well Stream preserved by the historic county and parish boundaries, with 94 per cent having been recorded with at least an 8-figure NGR.

The medieval period finds include 120 coins, of which 104 were struck before 1351. Only three coins of the Tealby type (1158–80) have been found in this area, followed by a substantial increase to 49 coins of the Short Cross type (1180–1247), or an average coin loss to ground of 0.73 per annum. This was sustained between the Long Cross re-coinages of 1247–50 and 1279–81 with 25 coin finds and loss rate of 0.78. Thereafter the finds dwindle in number to only 12 coins minted 1279–1351 and averaging a loss rate of 0.36, or a decline by 53.8 per cent. By contrast, in the adjoining broader area around the Wash (comprising NGR TF) the average rate of coin loss per annum remained quite stable through these periods: 724 and 1723 single finds for 1247–79 and 1279–1351, or a per annum loss rate increase of 5.7 per cent.

Water transport routes were of crucial importance to the economic wellbeing of ports and markets in the Fenlands, and the Wisbech sequence can be linked to radical transformations in the pattern of Fenland drainage. The Well Stream began to silt up in the 13th

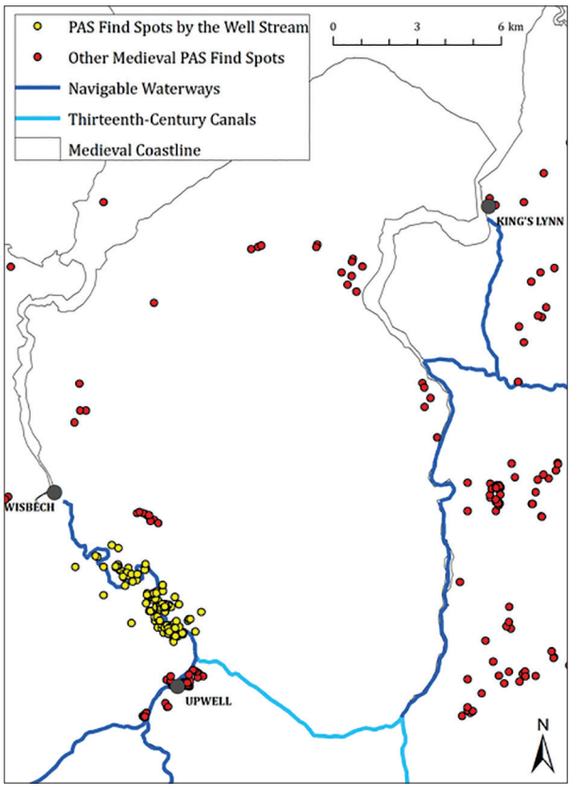

Figure 7 PAS 'Broad Period Medieval' find spots in northern Fenlands. Source: PAS database.

century, and a new eastwards canal was cut by Upwell, south of Wisbech (Bond 2007, 189–7). It transformed the landscape of transportation in the Fenlands by channelling the waters towards King's Lynn. King's Lynn was already an important port and fair centre, and the new canal can only have consolidated its position as the estuary grain depot for the Cambridgeshire region (Gras 1915, 62–3; Gardiner 2007, 87). The decline in coin finds by the Well Stream may be linked with the loss of commercial activities along the ancient water route, presaging its eventual extinction.

The coin finds by the former Well Stream serve as a simple example of how the numismatic material in the PAS database can be used to investigate and enhance our understanding of the history of medieval commercial sites, networks and the crucial infrastructure of travel and communications that bound them together. As this pilot project continues, we hope to further develop our methodologies for examining the PAS data in relation to the landscape of markets, commerce and transport in the Middle Ages, and to gather more evidence and examples of how the resources provided by the PAS can be used to shed new light on English and Welsh economic history.

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