



# Historic Extent of Floodplain Meadows: Dorset Stour and Thames Tributaries

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*Cover Image: Net Mead at Child Okeford, Dorset Stour  
(Dorset History Centre reference T/CHO – Child Okeford Tithe Map, 1840)*

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## Executive Summary

In 2017-18, Fjodr Ltd. carried out a pilot project on the Dorset Stour to develop a new GIS-based methodology for identifying the historic character of watercourses, funded by Historic England. During the project, meadows with distinctive funnel-shaped entrances from droveways were identified in the floodplain, echoing the entrances seen where roads and droveways enter a common to facilitate the movement of livestock. These funnel-shaped meadows generally look quite different to the fields surrounding them, which in turn seem to respect their often sinuous, irregular boundaries, suggesting that the funnel-shaped meadows predate the more organised enclosed fields that abut them. Furthermore, on tithe maps from the 1840s, the funnel-shaped meadows are often sub-divided into multiple strips demarcated by dotted lines that fit within the boundaries of the meadow. The system of dividing up meadow into strips to allocate hay followed by common grazing on the aftermath reflects a practice dating back to the medieval period.

Having noted these funnel-shaped floodplain meadows and their possible antiquity, Fjodr Ltd. approached the Floodplain Meadows Partnership in May 2020 to see if the identification of funnel-shaped meadows using a GIS-based approach might help in clarifying the historic extent of floodplain meadows to support nature conservation objectives. The Floodplain Meadows Partnership subsequently commissioned this project to develop and demonstrate a methodology in two study areas – on the Dorset Stour and the River Thames – that might be used to consider the historic extent of floodplain meadows nationally. The project focussed on using GIS to draw together map-based evidence to estimate how much of a floodplain in a river catchment was floodplain meadow in the past; how floodplain meadows were distributed relative to parishes; and to explore whether the amount of floodplain meadow might be related to the size of previous populations.

Looking at seven parishes on the Dorset Stour, the project identified additional floodplain meadows managed as commons and clarified the extent of those identified previously. The methodology was then applied successfully to eleven parishes on the Windrush, Thames and Cole. In both areas, the methodology confirms the persistence into nineteenth century mapping of a distinctive form of floodplain meadow with clear and quite consistent morphological features. Sufficient of these are shown subdivided into doles in tithe maps in the 1840s to indicate that they were managed as commons by allocating strips to individuals for hay followed by grazing of the aftermath. The need to move animals to and from the floodplain meadows gave rise to their funnel-shaped entrances accessed via droves connecting them to settlements. The importance of these droves and meadows caused them to be maintained while surrounding land was enclosed, though in many cases enclosure and private ownership subsequently encroached upon them.

The GIS enables the area of historic floodplain meadow managed as commons to be compared with the modern area of the floodplain. Generally, among the parishes examined, the area of floodplain meadow managed as commons is less than the area of floodplain, suggesting that only a moderate proportion of the available floodplain was either suitable or necessary as floodplain meadow.

The approach has shown that each parish had at least one floodplain meadow managed as commons. Some parishes had several, though this may reflect the presence of multiple historic settlements within a parish, some of which may not have survived to the modern period. Broadly, it appears that each settlement or parish had its own share of floodplain; this impression is reinforced by the close relationship between floodplain meadows managed as commons, their settlements, and the droveways that connected them.

There appears to be a relationship between the size of population (recorded as number of households) and the extent of meadow (in acres) recorded in the Domesday survey, where meadow is understood to mean 'land susceptible to flooding as it was next to water'. Moreover, the proportion of meadow recorded in Domesday from settlement to settlement among those selected

here is – in some instances – in close proportion to the area of floodplain meadow that has been identified. It might be tentatively suggested that there seems to be a correlation between the floodplain meadows identified in this study and the landscape of the Dorset Stour in 1086. There appears also to be a relationship between the geology of the Dorset Stour, the acreage of meadow and number of households recorded in Domesday, which may be attributable to the way that geology constrains the floodplain.

Looking at the Thames tributaries study area, comparison of the Domesday data for meadows with the identified floodplain meadows suggests that meadows increased in size after 1086, perhaps reflecting the increase in medieval population prior to its decline in the fourteenth century. There are, however, examples where the area of meadow does not appear to have varied much between the medieval period and the nineteenth century, which may reflect constraints on the floodplain acting as a limiting factor. As on the Stour, it was found there is a relationship between the number of households and the amount of meadow recorded in Domesday. The relationship warrants further exploration.

The project has shown that floodplain meadows once managed as commons persist in the landscape even where they are previously unrecorded. In some cases, their form and topographic features survive even if the habitat has been extinguished by intensive agriculture. Where they don't survive physically, the presence of floodplain meadows can be traced in historic maps, documents, and archive data. However, old maps don't speak for themselves: by the time the first detailed, precise and widely available maps were made – notably tithe maps in the mid-nineteenth century and large-scale OS maps in the late nineteenth century – floodplain meadows had already disappeared in some places due to enclosure or other encroachment. In these cases, identification of former floodplain meadows requires interpretation based on multiple sources.

Caution is required about the weight placed upon a few maps and geographical accounts given a history of floodplain meadows stretches over a millennium, if not longer, but there are sufficient sources for the earlier extent of floodplain meadows to be confidently mapped in many catchments. The approach offers a robust and transparent method for evidencing the former presence and extent of floodplain meadows managed in common, both locally and regionally. In turn, this offers a way of quantifying loss and rarity; but it is also a way of flagging potential sites for restoration, especially where their physical features still survive. The method also provides a means of directly integrating restorable meadows into catchment management alongside other opportunities for nature-based solutions.

The project has shown that floodplain meadows are not just physical things: they are the embodiment of cultural practices carried out by communities over many generations. They combine both tangible and intangible heritage. This character is underlined by their demonstrable relationship with the parishes and settlements that gave rise to them, and the droves that were key to their accessibility and gave them their distinctive form.

The results of this project support the view that floodplain meadows were both widespread and central to the organisation of the rural economy for at least a thousand years. Common governance, co-creation and public access were fundamental to floodplain meadows in the past, and perhaps also to their restoration and maintenance in future. The form of floodplain meadows surviving in the field and in documents embodies centuries of traditional knowledge: can we learn from the knowledge embedded in our historic landscape as we attempt to re-establish more resilient habitats, places, and communities?

# Historic Extent of Floodplain Meadows: Dorset Stour and Thames Tributaries

## 1. Introduction

Fjordr Limited has been commissioned by the Floodplain Meadows Partnership, hosted by the Open University, to consider the historic extent of floodplain meadows on selected stretches of the Dorset Stour and River Thames. The aim is to inform the development of an approach that might be used to consider the historic extent of floodplain meadows nationally, based on a historic mapping exercise using GIS to draw together evidence of floodplain meadows. The following objectives were provided:

- To estimate how much of a floodplain in a river catchment was floodplain meadow.
- To work out floodplain meadow distribution by Parish boundaries to establish whether every parish has its own share of floodplain.
- To explore whether it is possible to relate the size of floodplain meadow in a parish to size of population.

It was proposed that the work would be carried out in two stages. first, to develop the methodology on five parishes of the Dorset Stour, where the presence of floodplain meadows has been noted previously and where background sources were already available (Firth and Firth, 2020); second, to apply and further develop this methodology in ten parishes in the catchment of the River Thames and its tributaries.

## 2. Background

Funnel-shaped meadows – which appeared to be a form of floodplain meadow – were identified lying alongside the Dorset Stour during the *Historic Watercourses: Dorset Stour* project for Historic England (Firth and Firth, 2020).

The meadows noted on the Dorset Stour have distinctive funnel-shaped entrances (see Figure 14) that come off driveways and open onto areas of floodplain, echoing the funnel-shaped entrances seen where roads and driveways enter a common, to facilitate the movement of livestock (Rippon and Clark, 2004, p. 21; Ryder, 2013, pp. 110–112).

These funnel-shaped meadows generally look quite different to the fields surrounding them, which in turn seem to respect their often sinuous, irregular boundaries. This suggests that the funnel-shaped meadows predate the more organised enclosed fields that abut them. Furthermore, on tithe maps, the funnel-shaped meadows are often sub-divided into multiple strips – demarcated by dotted lines – that fit within the boundaries of the meadow. These strips – referred to here as doles – were allocated to Commoners so that they might harvest hay off their allocation, after which they could graze their livestock in common on the aftermath. This dole system of dividing up common land into strips reflects a practice that originates in the medieval period (see below).

The longevity of these meadows – apparently surviving in use from the medieval period until at least the 1840s when the tithe maps were drawn – reflects the length of time invested in attaining a good meadow, as Rackham (1999, p. 332) observes: ‘Making good grassland, although easy, took some years to produce a good pasture, and hence farmers and their landlords traditionally regarded pasture, and especially meadow, as a fixture: they were reluctant to plough it up even if this appeared to be profitable’. The huge importance of a good hay crop for the functioning and prosperity of agricultural communities has caused the form of these meadows to survive, causing them – together with other elements of medieval boundaries and field systems – to become incorporated into the post medieval and modern landscape whilst new field systems and patterns

of land use evolved around them. Consequently, the funnel-shaped floodplain meadows that are evident in nineteenth century and modern mapping – and which are still evident on the ground today in some places – may be the remnants of floodplain meadows that are medieval or earlier in date.

The earliest that might be assumed from sources such as field boundaries mapped on nineteenth century sources is that these floodplain meadows could date to around the 13th century. Much beyond this is conjecture and certainly it can be problematic to compare a Domesday landscape with what appears on the earliest OS drawings some 800 years later. However, numerous instances show that evidence of early landscapes can persist as ephemeral traces in field names, boundaries, and hollow ways dating back to the medieval period and even beyond. Parish boundaries (often following rivers or hollow ways) are probably the most persistent features through time: these boundaries often date back to the early medieval period and although they were not mapped until the 19th century they were certainly 'in place by the 12th century' (Ryder, 2013, p. 210). Long curving, continuous boundaries in the landscape can be the remnants of manorial boundaries, while medieval open fields (arable) can be identified in lidar data by the appearance of backwards s-shaped strips making up furlongs. There is good reason, therefore, to raise the possibility that funnel-shaped floodplain meadows, managed as commons, are very early features of the landscape.

The importance and value of meadows to the medieval and later rural economy is set out by Hall (2014, pp. 17–20), who notes that meadows were present both in the floodplains of major rivers but also adjacent to smaller tributaries. As with the contemporary arable land, which comprised strips within open fields that gave rise to such distinctive earthworks, meadows were also demarcated in strips referred to using various terms such as 'lots' or 'doles', which could be marked out on the ground with poles or stones (Rackham, 1997, pp. 337–8; Hall, 2014, pp. 18–19; McDonald, 2007, pp. 73–82; Bowden et al., 2009, pp. 27–28). The strips of meadow were allocated each year using various means, such as 'drawing lots'. Such practices lasted – in some cases – into the 20<sup>th</sup> century: meadow was being assigned in Yarnton and Begbroke, Oxfordshire, in 1910 using balls marked with the names of residents from the 13<sup>th</sup> century; and the area of meadow allocated approximated that referred to in the Domesday survey of 1086 (Hall, 2014, p. 19). In many places, the management of floodplain meadows as commons and their systems of allocation were variously replaced in the post-medieval and modern periods by private ownership of strips, of entire former commons, and of enclosed fields taking the place of former commons (Pearson and Soar, 2018).

It is likely that systems of common meadows predated the Domesday survey by several hundred years: King Ine's law code for Wessex included clauses on damage to common crops or grass including 'common meadow or other land divided into shares' in the late seventh or early eighth century (Rippon, 2014, p. 19; Williamson, 2015, p. 177). Use of floodplains for meadows appears to have intensified from the eighth century and seems to be associated in particular with the development from dispersed to nucleated settlements, with the intense collaboration required by haymaking perhaps even being one of the stimuli for people to cluster, especially where the topography and hydrology was favourable for meadows (Williamson, 2015, pp. 201–204). Williamson makes the further point that the link between the availability of land for meadows and the location of nucleated settlements is not diminished by meadows being at a distance from settlements, as a short walk would be outweighed by being able to organise labour and equipment from a large village (Williamson, 2015, p. 204). This helpfully underlines the point that the relationship between floodplain meadows and their communities is fundamental, embodied in the routes – droveways – that both connected them and contributed to their distinctive funnel-shaped forms.

There seem to be strong resonances between the management of floodplain meadows and the management of the Anglo-Saxon Fenland set out by Oosthuizen (2017). She makes the case that wetlands were not marginal or unproductive, but a source of prosperity based on understanding

and manipulating water and careful management of meadows for hay and grazing through rights of common. Movement of people and animals to make use of the fenland landscape as a whole were also critical. It may not be unreasonable to regard floodplain meadows as wetlands, as Oosthuizen sees the fens: perhaps on a smaller scale but similarly central to the prosperity of settlements rather than at the margin, as their appearance on tithe maps might be interpreted.

Archaeological evidence suggests that the use of floodplains as meadows for haymaking may stretch even further back. Investigations in the Upper Thames – in the general vicinity of the Thames tributaries study area used for this project – suggest that the floodplain was used for pasture in the Iron Age, with hay meadows appearing in the early Roman period, though they may not have been widespread (Booth et al., 2007, p. 22). McDonald pushes the maintenance of rough grazing at Port Meadow, Oxford, back to the Bronze Age, but suggests there is as yet no direct evidence for hay meadow as early as the Iron Age (McDonald, 2007, pp. 64–65). Booth et al. note that the population declined in the post Roman period and the intensity of agricultural activity with it, but the floodplain was not abandoned: use for grazing by domestic animals precluded woodland regeneration (Booth et al., 2007, p. 30). In the mid to late Saxon period (AD 650-1000) grassland in the floodplain was increasingly managed as hay meadow (Booth et al., 2007, pp. 30–31).

Investigations at Thornhill Farm near the Thames upstream of Lechlade echo this interpretation, with evidence for a hay meadow potentially contemporary with the site in the early Roman period (Jennings et al., 2004, p. 144). The site overall is interpreted as a specialised stock raising centre in the late Iron Age and early Roman period, including a funnel-shaped track or droveway dating to AD 50-100 (Jennings et al., 2004, pp. 150; Fig. 3.10). The Thornhill Farm site might have been part of a wider intensification that included the development of specialist pastoral farms in the floodplain in the late Iron Age, reflecting pressures and developments in Britain that continued into the Roman period. The invasion itself is invisible at Thornhill Farm, where the site was apparently unaffected. However, the landscape was radically reorganised in the early 2<sup>nd</sup> century AD associated in particular with the cultivation of hay meadows, perhaps as part of a more centrally organised estate (Jennings et al., 2004, p. 158).

A comparable concentration on the capacity of floodplains for specialised stock raising, including the production of hay, may have been important in the late Iron Age and Roman period on the Dorset Stour also, with its catchment characterised by the presence of major Iron Age sites in close proximity to the river. It is perhaps too great a stretch to suggest that the funnel-shaped floodplain meadows still visible in the landscape are survivals from the Iron Age; but it is reasonable to suggest continuities in the use of the floodplain for meadow – in different forms and places – stretching back over two millennia.

Having noted these funnel-shaped floodplain meadows alongside the Dorset Stour and their possible antiquity, Fjordr Ltd. approached the Floodplain Meadows Partnership in May 2020 to see if the identification of funnel-shaped meadows using a GIS-based approach might help in clarifying the historic extent of floodplain meadows to support nature conservation objectives. Following discussion, the Floodplain Meadows Partnership commissioned this project in August 2020.

### 3. Methodology

#### 3.1. Overview

The methodology used for this project is derived from the methodology developed by Fjodr to map human uses and interventions in watercourses for a wide range of different purposes ('themes') over the millennia (Firth and Firth, 2020). This underpinning methodology uses GIS to map Historic Watercourse Polygons (HWPs). In this project, the general methodology was applied specifically to floodplain meadows that owed their origin to meadows managed as commons in the floodplain. These (formerly common) floodplain meadows are referred to as FPMs hereafter. Identified meadows are numbered individually, starting at FPM1 in each study area.

It should be noted that the FPMs that have been identified and recorded in this project may not have been managed as commons at the time they were mapped in nineteenth century sources. Furthermore, the identification of FPMs does not imply that these were the only lands that might be characterised as floodplain meadows in terms of their past use or the habitats they supported: privately managed land (held 'in severalty') in the floodplain was certainly cultivated as meadows too (Rackham, 1997, p. 337). Rather, this project focusses on FPMs based primarily on their form in the landscape indicating considerable longevity, reaching back to the medieval organisation of the rural economy and perhaps earlier. This focus on the form of meadows indicative of common management over many centuries is supported by other strands of evidence, as discussed below.

The general approach is to identify FPMs using GIS to combine a variety of mapped sources using QGIS (v. 3.10 Coruña LTR through to v. 3.16 Hannover LTR). Within the GIS environment – referred to as a project – mapping and data is introduced in layers in .shp/shapefile format or tif/raster format; and a new shapefile (floodplainmeadows.shp) was created to digitise the interpreted extent of FPMs and to record their attributes. Additional data layers were created to assist in the interpretation, as referred to below.

The evidence collated for identifying FPMs in the study areas identified along the Dorset Stour falls into two principal groups: base mapping and historic sources. On the Dorset Stour, reference was also made to the HWP Dorset Stour shapefile that identified funnel-shaped meadows in the initial *Historic Watercourses: Dorset Stour* project (Firth and Firth, 2020).

The methodology used to identify FPMs on the Dorset Stour was replicated for the Thames tributaries (rivers Windrush, Thames and Cole). For the Dorset Stour, however, all the water courses in each parish were examined (including, for example, minor tributaries) whereas on the Thames tributaries the focus was solely on the potential for FPMs adjacent to the channels of the Windrush, Thames and Cole. The rationale is that the floodplain of the Thames tributaries is very much greater than for the Stour, whilst the coverage of tithe maps and apportionments – essential for field names – was much more variable (see below). It is possible, therefore, that FPMs associated with the minor tributaries of the Thames are not fully represented. Moreover, the Thames floodplain is so broad in places that it extends beyond the parishes adjacent to the main rivers. Consequently, there are instances of FPMs associated with the Thames floodplain in parishes that do not adjoin the main rivers, such as on the Langford and Broadwell brooks in Langford<sup>1</sup>.

Whilst it was initially hoped that some recourse might be made to material held as hard copy in local archives, ongoing restrictions relating to covid-19 meant that this was not practicable.

#### 3.2. Study Area: Dorset Stour

Seven parishes were selected along a stretch of the Dorset Stour (Figure 1). The selection was based on the overall pattern of funnel-shaped meadows identified in the earlier *Historic*

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<sup>1</sup> VCH <https://www.british-history.ac.uk/vch/oxon/vol17/175-208> Figure 51.

*Watercourses: Dorset Stour* project. The parishes selected provided a reasonably compact study area with clear evidence of funnel-shaped meadows: these meadows are less evident further upstream and also diminish downstream, before becoming more evident – though apparently more dispersed – in the lower stretches of the Stour. The seven parishes are as follows:

- Sturminster Newton
- Hinton St Mary
- Manston
- Okeford Fitzpaine
- Hammoon
- Child Okeford
- Shillingstone

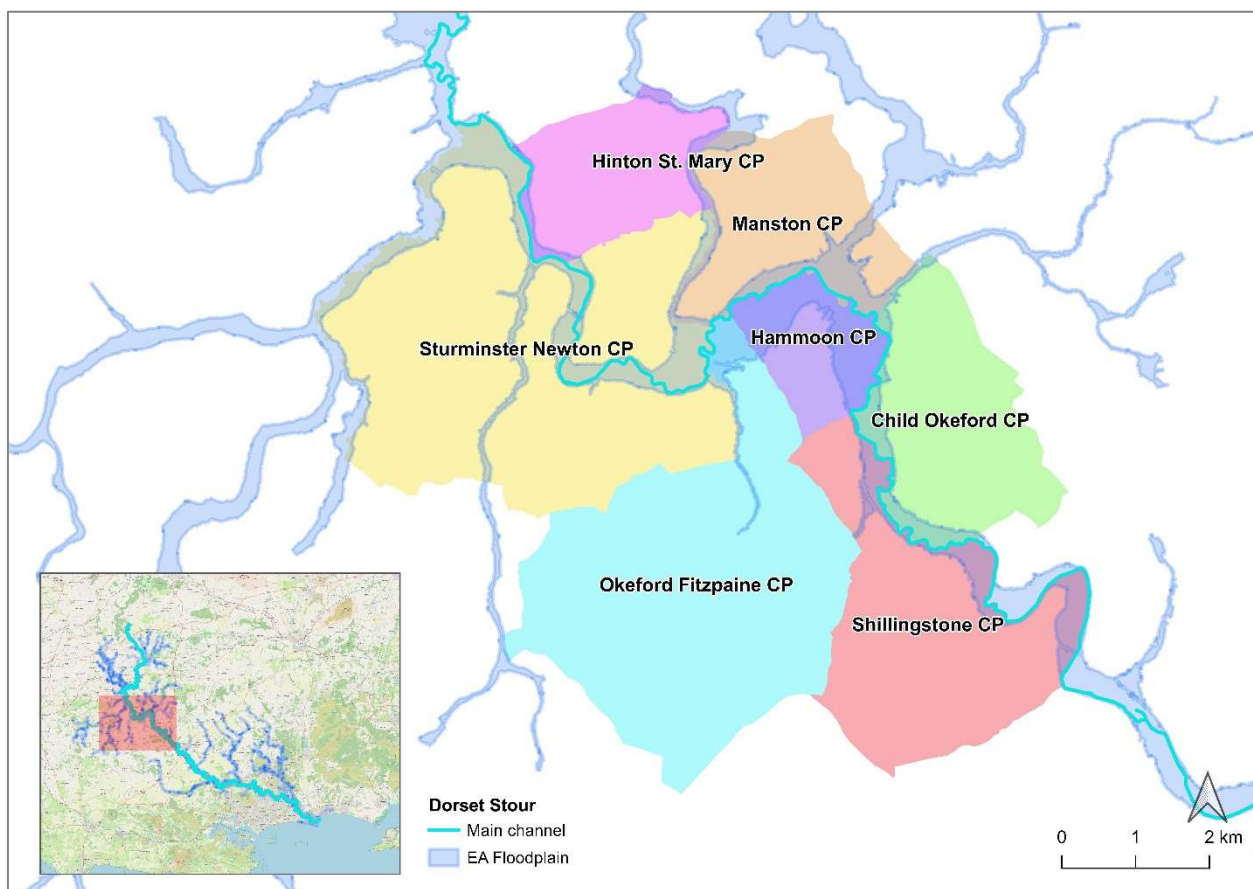


Figure 1 Selected parishes along the Dorset Stour. Insert shows location of parishes in relation to the entire length of the river (insert © OpenStreetMap contributors<sup>2</sup>).

The parishes conjoin and provide an overview of a continuous stretch of the river from the parish of Sturminster Newton in the north to Shillingstone in the south. Originally, only five parishes were selected, but Okeford Fitzpaine was included as this parish occupies a small stretch of the Dorset Stour between Sturminster Newton and Hammoon. Shillingstone, located opposite Child Okeford, was another additional parish as its inclusion gives continuity along this stretch of the Dorset Stour.

<sup>2</sup> Base map and data from OpenStreetMap and OpenStreetMap Foundation <https://www.openstreetmap.org/copyright>.



### 3.3. Study Area: Thames Tributaries

The selection of parishes on the Thames tributaries was driven initially by the availability of tithe maps and apportionments, which is variable. Using the Oxfordshire Tithe Coverage Map<sup>3</sup> and in discussion with the Floodplain Meadows Partnership, parishes were selected from Ducklington to Standlake on the Windrush, then from Standlake continuing to Lechlade in Gloucestershire (Figure 2). For the Cole, the parish of Inglesham, Coleshill and Highworth were selected. Other historic map sources were also checked in areas where there was no tithe map and apportionment available, to see whether FPMs could be recognised from these other maps.

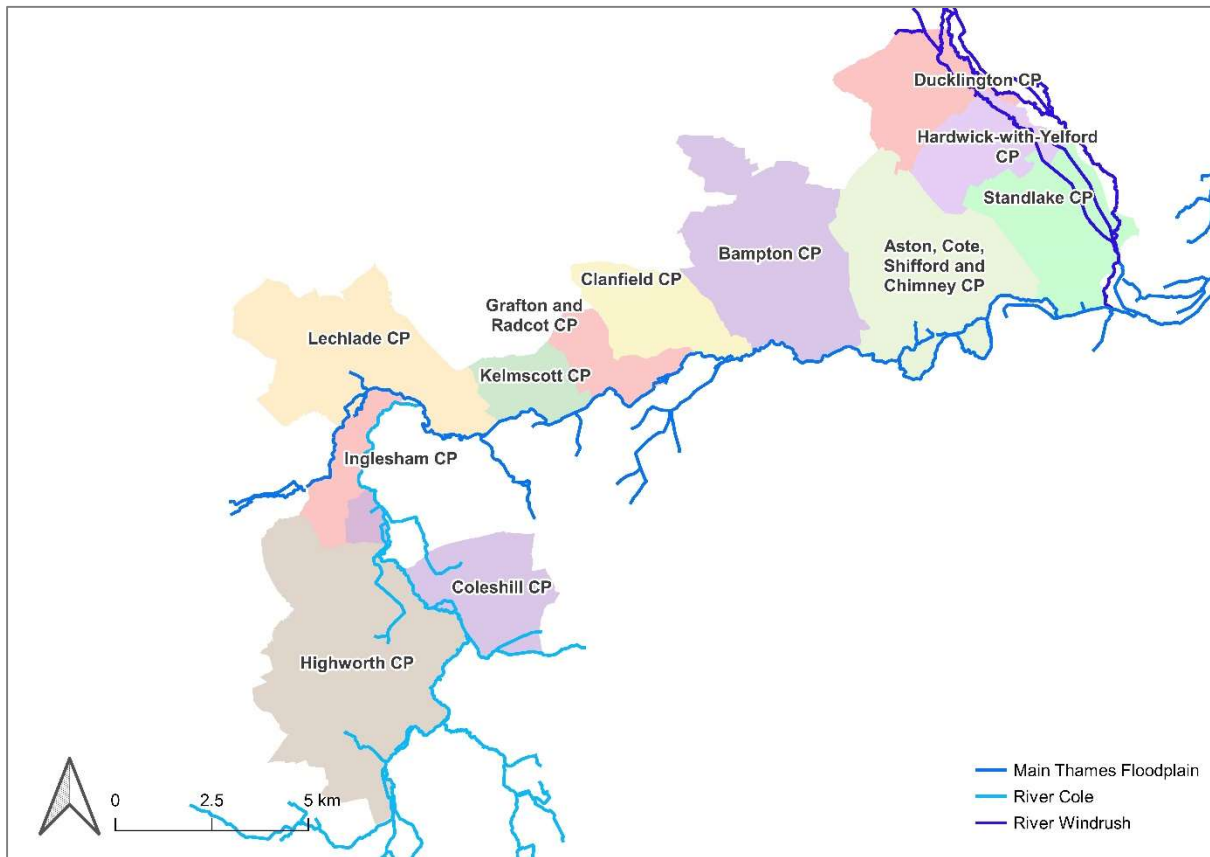


Figure 2 Parishes selected along the Thames, Windrush and Cole.

As noted above, the floodplain of the Thames is very extensive and merges with minor, often unnamed tributaries either within the floodplain or adding their own floodplains. Although this did not significantly affect the identification of FPMs – most of them are located adjacent to the Windrush, Thames and Cole – it is possible that there are further FPMs within these parishes associated with these minor tributaries.

A further difference between the Stour and the Thames tributaries is that settlements, rather than parishes, became a key focus. Several of the Thames parishes have multiple settlements, so attention centred on settlements situated close to the rivers and documented in Domesday; there are also settlements that may not appear in Domesday but where reasonably detailed information is held in the Victoria County History (VCH) for Oxfordshire<sup>4</sup> that could be used. Consequently, the relationship between parish and extent of FPMs is not so direct as on the Dorset Stour.

As the relationship between the Thames floodplain, settlements, parishes and available tithe maps was less comprehensive than for the Dorset Stour, it was not appropriate to calculate the percentage of FPM area within the floodplain for each Thames parish.

<sup>3</sup> <https://www.oxfordshirehistory.org.uk/public/maps/tithe/zoom.htm?Oxon-Tithe-Coverage-Map>.

<sup>4</sup> <https://www.british-history.ac.uk/search/series/vch--oxon>.



To increase the overall transparency of the method, a confidence level was assigned to every FPM identified on the Thames tributaries. The levels range from 1 – low confidence (for example, where there is a small amount of evidence to suggest that there is an FPM in the area, but later field systems may have obscured the boundaries), to 5 – high confidence (where the FPM is shown on multiple sources, is clearly referenced as a common floodplain meadow, and its boundaries are still clear today).

### **3.4. Base Mapping**

#### **Rivers**

Layers for main channels and tributaries were obtained from OS Open Rivers<sup>5</sup>, which is available as open access data from the OS. The dataset is national, so the rivers in the study areas were selected and saved to new layers. The Open Rivers dataset comprises a centreline only for these watercourses.

In order to represent the watercourses not only as a centreline but also as having lateral extents, separate layers were sourced from OS Open Map – Local (Vector)<sup>6</sup> by selecting and combining the Surface Water Area shapefile for the 10-kilometre grid squares covering the study areas.

It is worth noting that the Surface Water Area shapefiles typically show smaller watercourses than the Open Rivers dataset including, for example, minor drains.

#### **Risk of Flooding from Rivers and Sea**

The extent of the modern floodplain was mapped using Environment Agency data for Risk of Flooding from Rivers and Sea, downloaded from the Defra Spatial Data Download Platform<sup>7</sup> as a shapefile. Within this layer are polygons representing high, medium, low, and very low risk of flooding. For the Dorset Stour, these polygons were merged together to produce a layer showing the extent of the modern floodplain. For the Thames tributaries, the different levels of risk of flooding were maintained in the layer.

It is certain that the modern floodplain will have changed since the medieval period due to modern alterations to rivers, drainage of the surrounding land, the effect of the built environment and climate variability. Nonetheless, the modern extent of the floodplain – based on risk of flooding – currently appears to be the best, readily available guide to the extent of the floodplain in earlier periods.

Mentions in the text of ‘the extent of the (modern) floodplain’ refer to the area defined by the EA Risk of Flooding from Rivers and Sea.

#### **Parish Boundaries**

Parish boundaries were obtained from the OS Boundary-Line<sup>8</sup> product, which contains shapefiles for all administrative boundaries in Great Britain. The parish\_boundary.shp were imported into the GIS project.

Parish may change over time: for example, Fiddleford was in the parish of Sturminster Newton at one time but is now in the parish of Okeford Fitzpaine; and switching of areas between parishes

<sup>5</sup> <https://www.ordnancesurvey.co.uk/business-and-government/products/os-open-rivers.html>.

<sup>6</sup> <https://www.ordnancesurvey.co.uk/opendatadownload/products.html#OPMPLC>.

<sup>7</sup>

<https://environment.data.gov.uk/DefraDataDownload/?mapService=EA/RiskOfFloodingFromRiversAndSea&Mode=spatial>

<sup>8</sup> <https://www.ordnancesurvey.co.uk/opendatadownload/products.html#BDLINE>.

has been a particular challenge on the Thames. As noted above, however, parishes are generally very old administrative units often with recorded boundaries stretching back into the medieval period; indeed, the current boundaries sometimes reflect physical boundaries that are no longer present, such as the former route of watercourses. Consequently, the modern parish boundaries mapped in GIS are likely to represent considerable continuity with much earlier features.

### 3.5. Historic Sources

#### 25" Ordnance Survey maps

The 25" OS County Series (1841-1952) is the most comprehensive mapping available for historic periods. These were made available in the project GIS via a WMS link to Edina Digimap provided by the Floodplain Meadows Partnership under the Open University's licence. Generally, Epoch 1 – the earliest editions typically dating to around 1880 – was used in the GIS.

#### British Library Ordnance Survey Drawings

Recently the British Library has made available, via its Georeferencer<sup>9</sup> website, the Ordnance Survey drawings made between 1780s and 1840 in preparation for the first edition of one-inch OS maps (Figure 3).



Figure 3 From the Index Map to the Ordnance Surveyors' Drawings 1789 -c.1840 from the Research Publications Microform Collection (2006)<sup>10</sup> County Boundaries in Black, O.S.D boundaries in red. Drawings used are highlighted in yellow.

<sup>9</sup> <http://britishlibrary.georeferencer.com/start>.

<sup>10</sup> Index Map available at <http://www.bl.uk/images/maps/osdindex.jpg>.

These drawings are original preliminary drawings that can contain more detail than the printed OS one-inch maps that were based upon them. For example, the survey drawings include shading to depict topography as well as greater detail on field boundaries and trackways, so access to FPMs could often be clearly seen. Some areas seem to be stippled to denote commons.

The maps were brought into the QGIS project via a WMS link from the British Library.

There are some issues with the georeferencing of these drawings, as they do not always align with the tithe and 25" OS mapping. The difference between the map sources is demonstrated by FPM 15 at Lower Common, Child Okeford (Brackey Meads and Fontmell Mead), originally identified during the *Historic Watercourses: Dorset Stour* project.

Using the tithe map and the OS drawings, it has been possible to extend the area covered by FPM 15. The OS drawing shows the FPM is adjacent to Okeford Common (on Epoch 1 called Lower Common), sharing a funnel-shaped entrance with this common. Due to either a georeferencing or a surveying discrepancy (the latter being the more likely given other features appear to fit quite well elsewhere), the Dorset Stour appears to be in a different location on the OS drawings when compared with the 25" OS map and the tithe map, both of which align with each other reasonably closely (Figure 4).

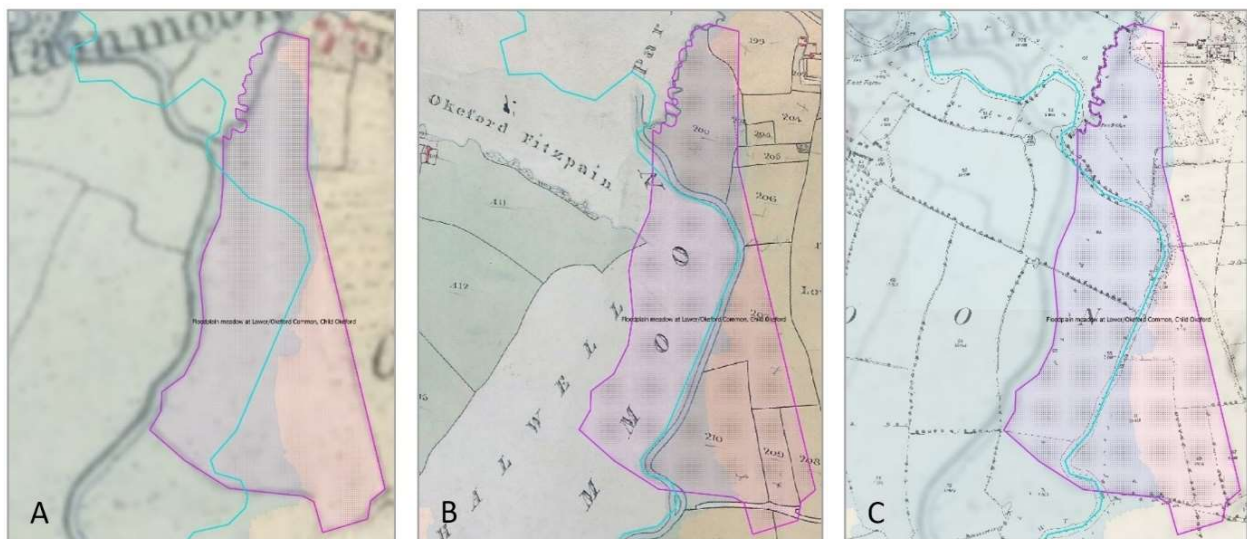


Figure 4 FPM 15 at Lower Common, Child Okeford showing differences between the sources, with the FPM mapped against A. the 1808 OS drawing, B. Child Okeford tithe map, and C. Epoch 1 25" OS

Initially, it was assumed that there might have been major re-routing of the Dorset Stour in the period between the OS drawing (c. 1808) and the tithe map (c. 1840), as the river at Hammoon just upstream has clearly been re-engineered in the 19<sup>th</sup> and 20<sup>th</sup> century. However, closer examination suggests it was more likely that the surveying on the OS drawing is incorrect at this point, and the true extent of this FPM is best derived from the 25" OS and tithe maps (Figure 5), even though the OS drawing is earlier.

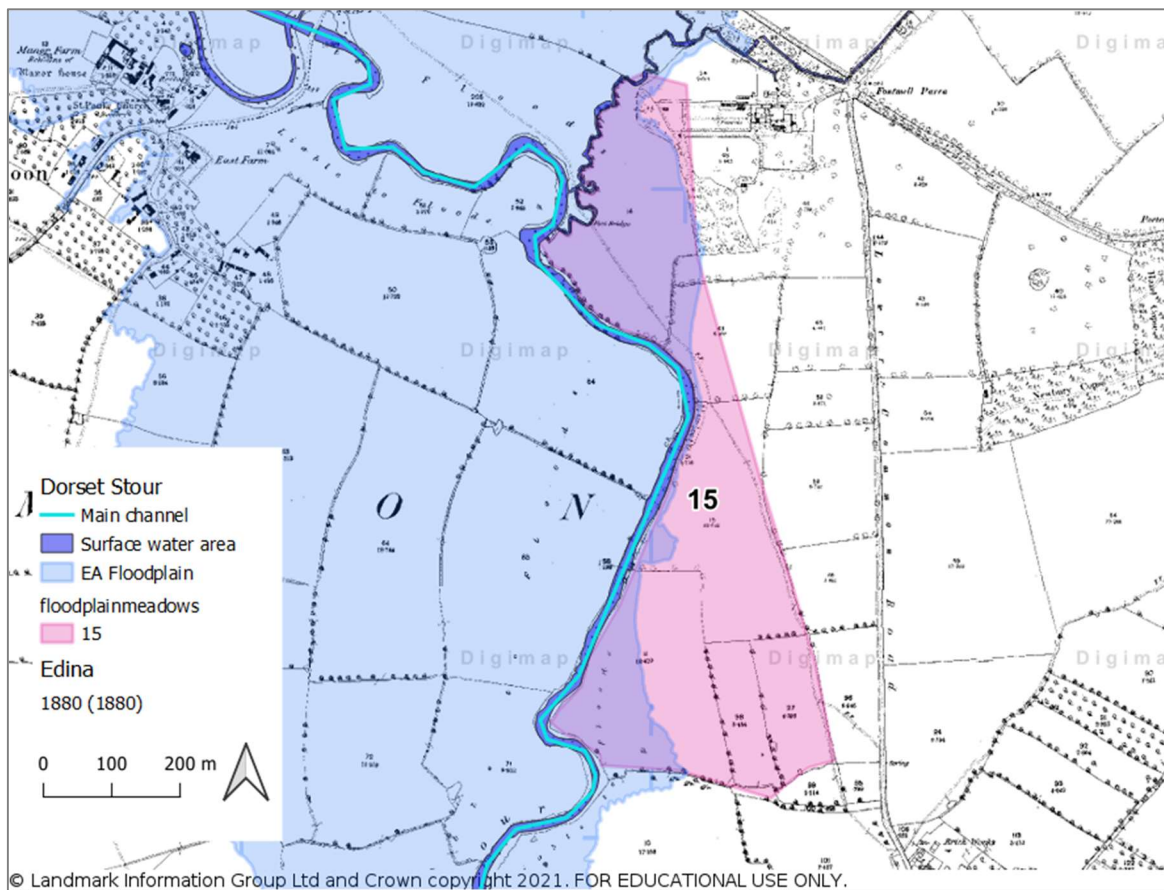


Figure 5 Best fit of FPM 15 Lower Common, at Child Okeford on Epoch 1 25" OS

Five drawings cover the Dorset Stour:

- Cranborne. Sheet 65. Depicted date 1807. Publication Date 1807-08.
- Poole. Sheet 66w. Depicted date 1805. Publication Date 1805-07.
- Dorchester. Sheet 57. Depicted date 1805. Publication Date 1805-06.
- Sherborne. Sheet 53. Depicted date 1808. Publication Date 1808-09.
- Shaftesbury. Sheet 58s. Depicted date 1808. Publication Date 1808-09.

Of these, two – Sherborne and Shaftesbury with the same depicted date of 1808 – cover the selected parishes.

For the Thames tributaries, the parishes selected for the study area were covered by the following OS drawings:

- Bampton. Sheet 161. Depicted date 1811. Publication Date 1811.
- Wantage. Sheet 160. Depicted date 1811. Publication Date 1811-12.
- Cirencester. Sheet 164. Depicted date 1816. Publication Date 1816.

Unfortunately, the OS drawings for the Thames tributaries study area are not as detailed as for the Dorset Stour.

### Tithe Maps and Apportionments

Tithe maps and their accompanying apportionments provide information about the ownership, occupiers and topography of parishes in the 1840s, predating Epoch 1 of the 25" OS maps by about 40 years. Their context and character, and potential for investigating floodplain meadows,



are set out comprehensively by Pearson, Soar and Carter (Pearson and Soar, 2018; Pearson et al., 2019).

Tithe maps and apportionments are available from Record Offices and online subscription providers. Photographs of the Dorset tithe maps had previously been obtained from Dorset Heritage Centre during the *Historic Watercourses: Dorset Stour* project but are also available from Ancestry<sup>11</sup>: The relevant maps for the selected parishes were downloaded and georeferenced within the GIS project. The tithe apportionment records were accessed at The Genealogist<sup>12</sup> website. A single set of tithe maps provided complete cover of the parishes selected for the Dorset Stour study area.

The coverage of tithe maps and apportionments for the Thames tributaries study area was more complex. The following tithe maps were downloaded from The Genealogist website and were then georeferenced.

Id	Tithe Name	Tithe Year	The Genealogyis image reference
<b>River Thames</b>			
1	Map of the Parish of Lechlade in the County of Gloucester 1839	1839	13Gloucestershire_122Lechlade_001_BWTNA
2	Plan of the district of Grafton in the Parish of Langford	1844	27Oxfordshire_066GraftonLangford_001_BWTNA
3	Map of the Parish of Radcot in the Counties of Berks and Oxon 1840	1840	27Oxfordshire_114RadcotLangford_001_BWTNA
4	Map of the Parish of Clanfield in the County of Oxford 1838	1838	27Oxfordshire_037Clanfield_001_BWTNA
5	Map of District comprising Burroway Meadow, Charney otherwise Sharney Meadow, Norton Meadow, and also certain the lands lying with the parish of Blackfournton in the County of Oxford 1844	1844	27Oxfordshire_026BurrowayMeadowCharneyMeadowNortonMeadowBourtonMeadowandpartofBlackBourtonparish_001_BWTNA
6	Map of the Titheable Lands in the Township of Bampton 1858	1858	27Oxfordshire_011Bampton_001_BWTNA
7	A Plan of the Hamlet of Aston and Cote in the Parish of Bampton 1840	1840	27Oxfordshire_007AstonandCoteBampton_001_BWTNA
8	Plan of the Hamlet of Chimney in the Parish of Bampton Oxfordshire 1846	1846	27Oxfordshire_034ChimneyBampton_001_BWTNA
9	Map of the Hamlet of Shifford in the Parish of Bampton in the county of Oxford 1847	1847	27Oxfordshire_121ShiffordBampton_001_BWTNA
<b>River Windrush</b>			
10	The Township of Brighthampton in the Parish of Bampton Oxon 1851	1851	27Oxfordshire_020BrighthamptonBampton_001_BWTNA
11	Plan in the Parish of Standlake Oxon 1841	1841	27Oxfordshire_128Standlake_001_BWTNA
12	Tithe for Hardwick in Ducklington Parish 1851	1851	27Oxfordshire_069HardwickDucklington_001_BWTNA
13	Plan of the Parish of Ducklington in the County of Oxford 1838	1838	27Oxfordshire_052Ducklington_001_BWTNA_modified
14	Parish of Yelford in the County of Oxford 1848	1848	27Oxfordshire_156Yelford_001_BWTNA
<b>River Cole</b>			
15	Map of the Parish of Inglesham in the Counties of Wiltshire and Berks 1842	1842	38Wiltshire_151Inglesham_001_BWTNA_modified

<sup>11</sup> <https://www.ancestry.co.uk/search/collections/2386/>.

<sup>12</sup> [https://www.thegenealogist.co.uk/search/advanced/landowner/tithe-records/?fn=&fn\\_ph=ph&sn=&sn\\_ph=ph&county=Wiltshire&parish%5B%5D=&parish%5B%5D=Sutton+Mandeville&plan\\_no=&organisation=&kw=&a=Search#645](https://www.thegenealogist.co.uk/search/advanced/landowner/tithe-records/?fn=&fn_ph=ph&sn=&sn_ph=ph&county=Wiltshire&parish%5B%5D=&parish%5B%5D=Sutton+Mandeville&plan_no=&organisation=&kw=&a=Search#645).

16	Map of the Parish of Coleshill in the County of Berks 1841	1841	02Berkshire_039Coleshill_001_BWTNA
17	Map of the Parish of Coleshill in the County of Berks 1841	1841	02Berkshire_039Coleshill_001_BWTNA
18	Map of the Titheable Part of the Parish of Highworth in the county of Wilts 1840	1840	38Wiltshire_137Highworth_001_BWTNA

Table 1 List of tithe maps available for the River Thames, River Windrush and River Cole.

Along both the Thames and the Cole, there are stretches where tithe maps are missing from the records, or if a tithe map is available, it had limited coverage– for example, only a very small proportion of Bampton was available. Figure 6 illustrates the coverage of tithe maps for the Thames tributaries study area.

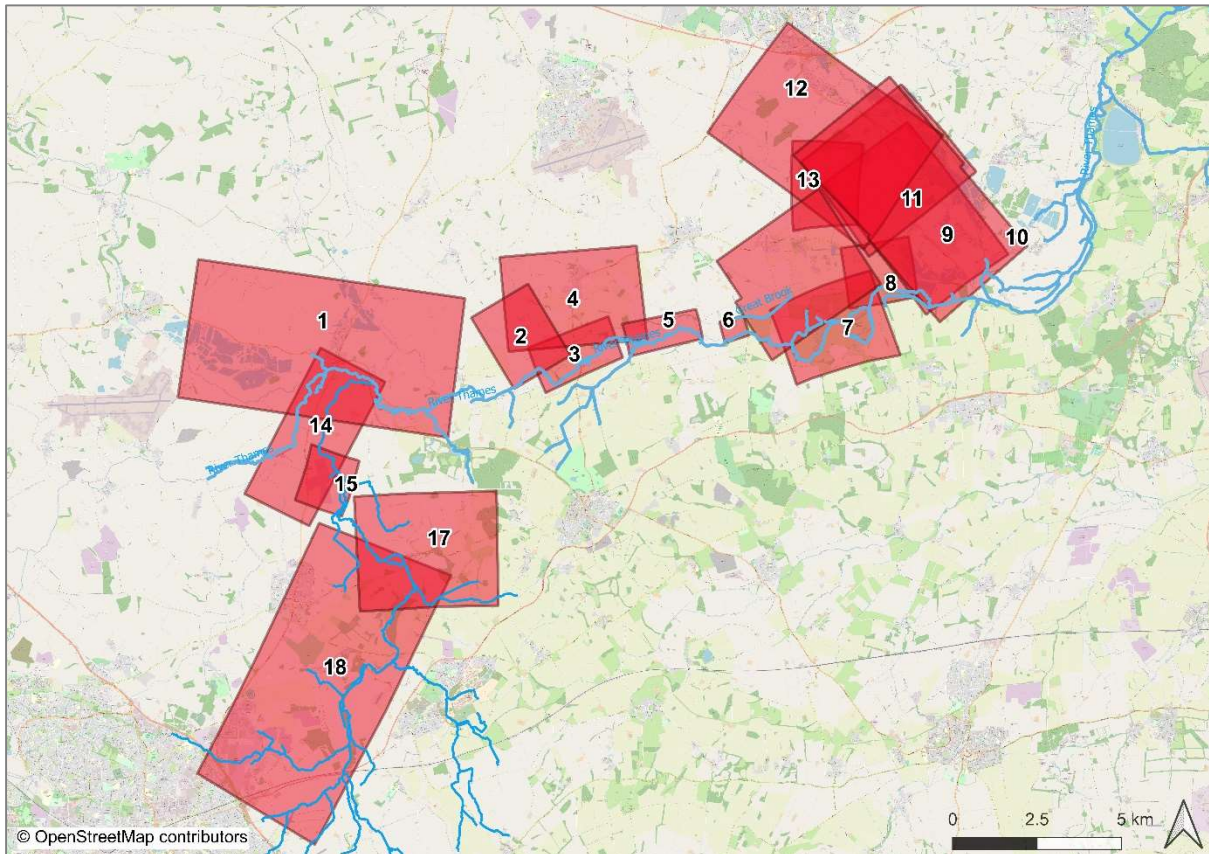


Figure 6 Tithe map coverage for the River Thames, River Cole and River Windrush.

Furthermore, the maps available to download for the Thames tributaries were of lower resolution to those used on the Dorset Stour, which meant using the higher resolution tithe maps on the website had to be used alongside the downloaded ones to read the plot numbers referring to the apportionment records, which were also available on the website.

The field names and state of cultivation in the tithe apportionments are of particular interest to this study because these names frequently have a historical origin and may indicate even earlier uses of the land. Rackham (1997, p. 333) identifies the following place name meanings:

- *mead* derives from *mæd* 'to mow', indicative of the process of making hay for winter feed;
- *ham(m)* often thought to mean water meadow but means a place in the flood plain and does not relate to its usage as either pasture or meadow;
- *leaze* from *læs* known from biblical translations to mean pasture;
- *ley* from *lēah* meaning grassland that has formerly been arable and used as an alternative for mead and distinct from *lēah* meaning wood or clearing;



- *Stear/Sturt*: tongue of land, especially one between two branches of a stream<sup>13</sup>.

These names occur frequently on the tithe apportionment records for the selected parishes. For the Dorset Stour study area, it was decided to examine in detail at least one parish to establish whether there was any distribution pattern of plots with relevant names that would help identify FPMs. Consequently, in the parish of Sturminster Newton all tithe plots that included any of the above names, or where the state of cultivation was recorded as a meadow, were digitised to see whether there was any correlation between the use of specific names, their state of cultivation, and their location in relation to the floodplain (Figure 7).

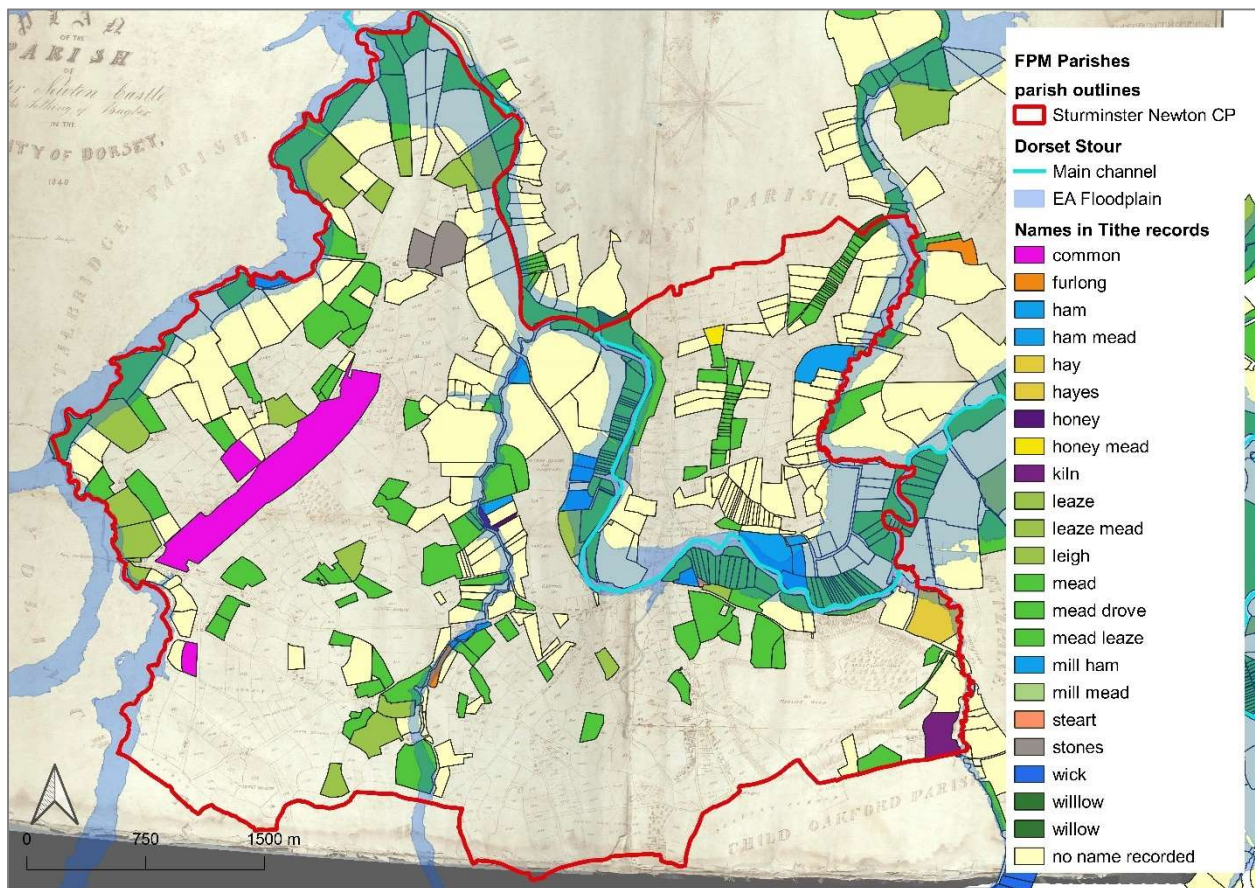


Figure 7 Tithe plots in Sturminster Newton Parish where certain terms occur within the tithe name.

This exercise showed that plots with mead names were found distributed across the entire parish, both in upland areas and within the floodplain; but plots with 'ham' in their name were always located adjacent or very near to the river. Given this result, it was decided that for the remaining parishes, only those plots that were either wholly or partially located within the floodplain would be digitised and their apportionment information (name and state of cultivation) recorded.

Very few plots where the state of cultivation was arable were found adjacent to the river: most of the plots in the floodplain were either meadow or pasture (Figure 8).

<sup>13</sup> <http://www.hantsfieldclub.org.uk/publications/hampshirstudies/digital/1920s/vol9/Grundy.pdf>.

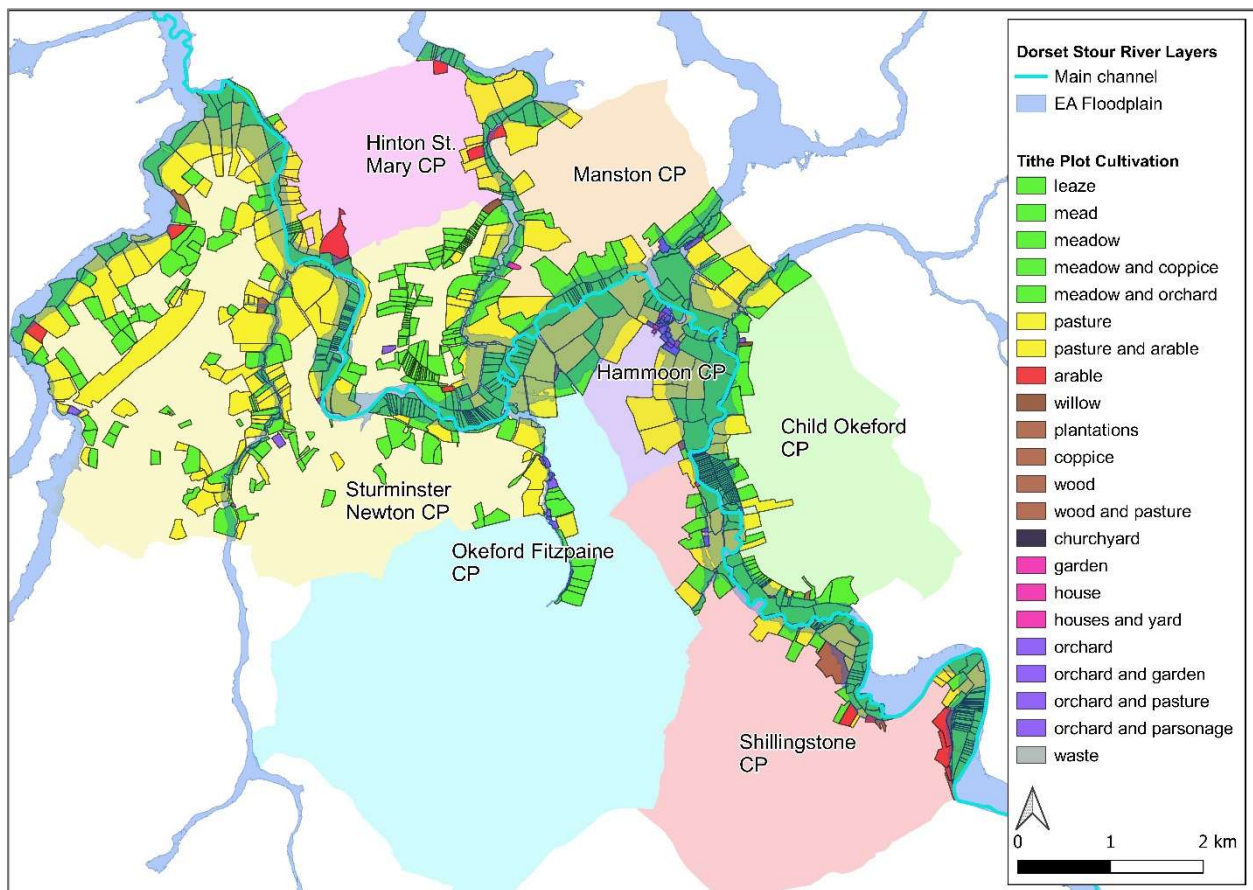


Figure 8 Tithe plot cultivation across all seven parishes along the River Stour

Using the tithe plots, areas of the floodplain that were not being cultivated as either arable or meadow can facilitate the identification of areas that may possibly be former meadows (Figure 9). These plots are typically either meadow or pasture; with arable plots occurring less frequently. Other plots identified included managed woodland such as withy beds, while orchards are often found situated close to settlements.



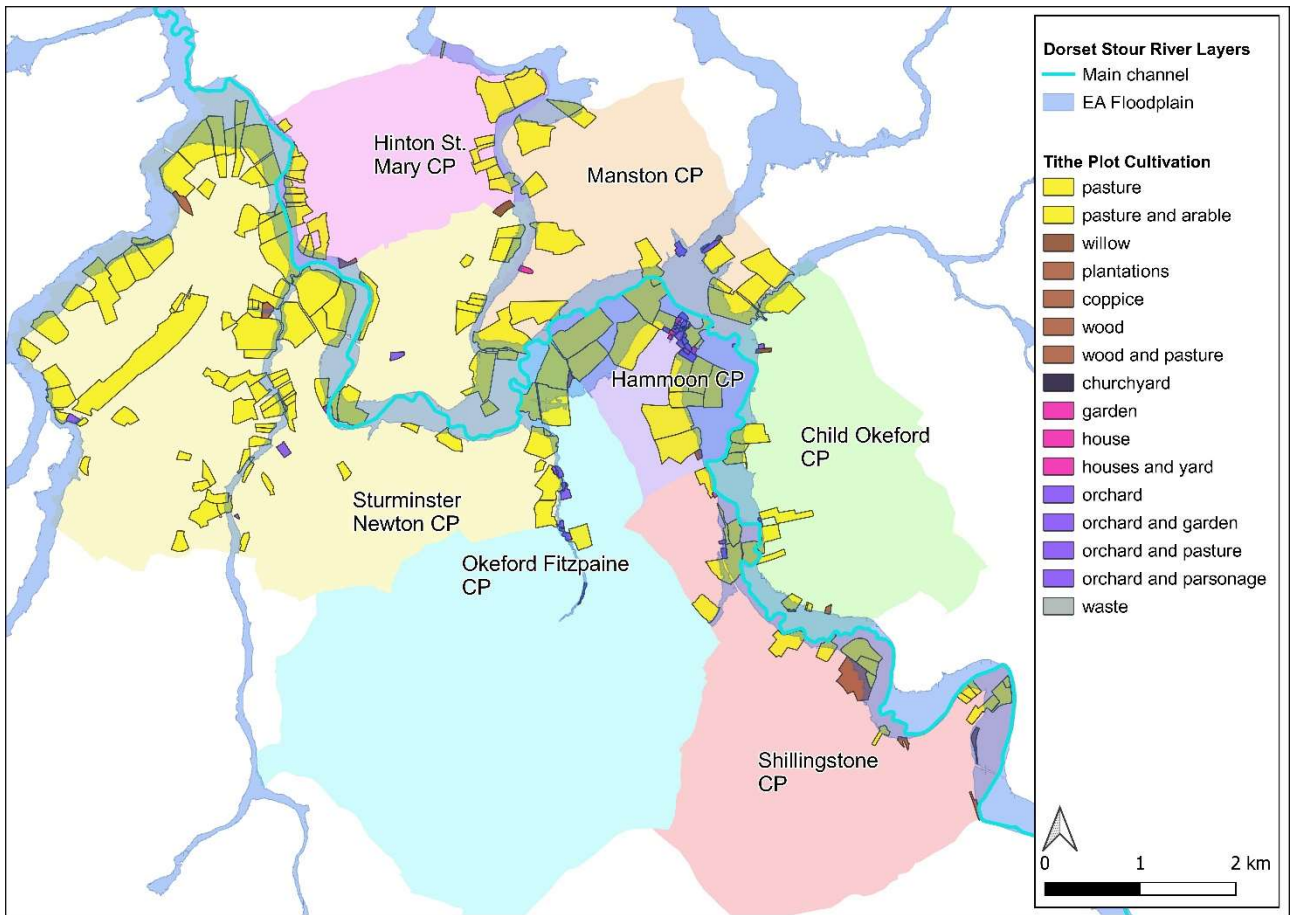


Figure 9 Tithe plots that are not meadow or arable within the floodplain.

Figure 10 illustrates plots that were digitised in the south of Shillingstone, selecting only those plots that fall within the floodplain.

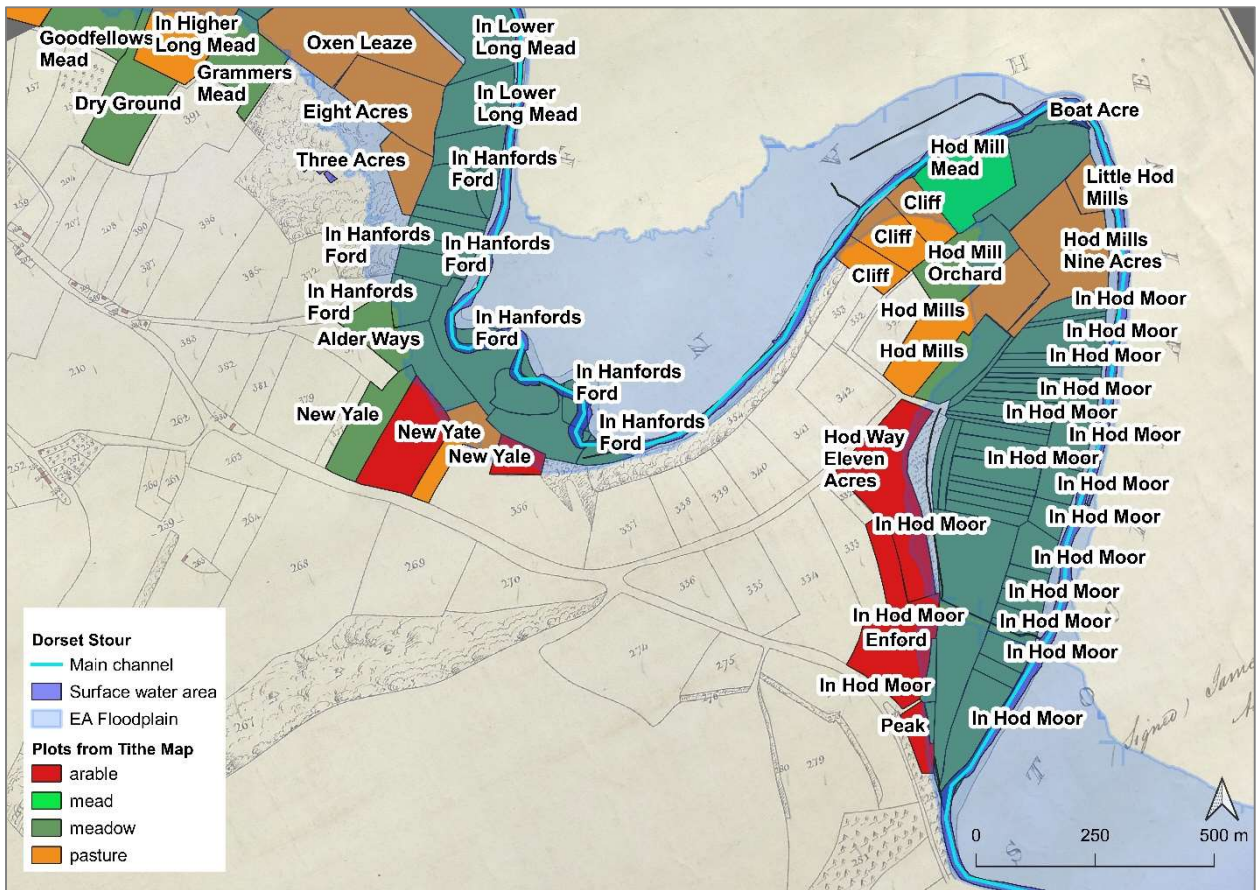


Figure 10 Digitised tithe plots within the modern flood plain, Shillingstone to the west of the Stour. The area of plots next to the river that are not digitised are not within the floodplain. The floodplain to the north and east of the river is within an adjoining parish, outside the study area.

The area of plots named Hod Moor is FPM 22. The tithe map illustrates how the doles within this area respect what is thought to be the earlier boundary of this meadow, which fans out either side of a driveway to creating a funnel-shaped entrance.

The cultivation types recorded in the tithe apportionments for the Thames tributaries differed to those recorded in the Dorset Stour apportionments. The cultivation type for tithe plots recorded adjacent to the Dorset Stour were usually recorded as 'meadow' and rarely 'pasture'. However, along the Windrush, Thames and Cole, pasture was more commonly recorded than meadow.



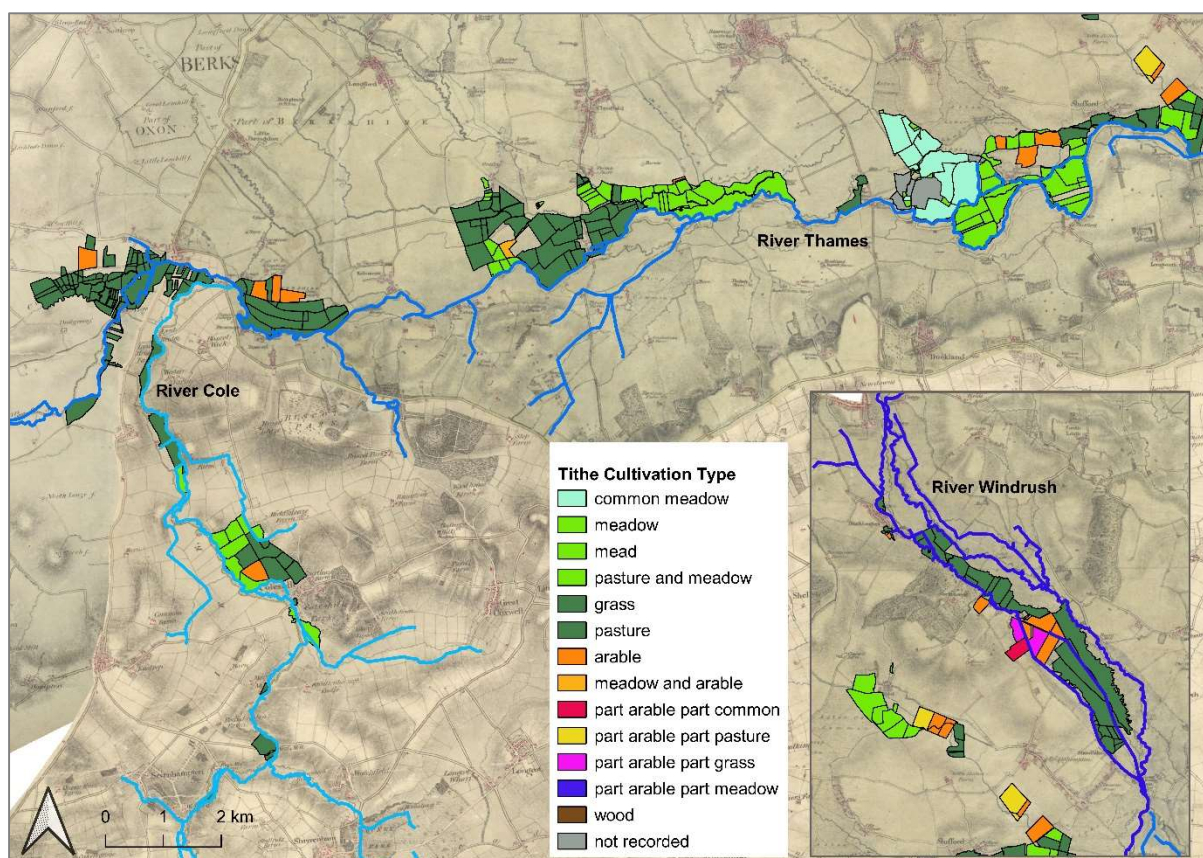


Figure 11 Tithe plots and their cultivation type recorded along the route of the Thames and Cole, with the Windrush illustrated in the inset map. Gaps along the river indicate where no tithe maps were available.

Figure 11 illustrates the distribution of the cultivation types recorded in the apportionments. It suggests that different recording practices were applied at the time of creating the apportionments, which affects the apparent distribution of ‘meadows’ and ‘pasture’ along the rivers. Some parishes were clearly recording plots as meadows, while other parishes were recording plots within areas that were meadows as ‘pasture’. The choice of recording pasture or meadow may be due to the time of year that the apportionment was taken: if recorders were surveying in May, they may have viewed the area as meadow; but if later in the year and cattle were grazing, they may have perceived it as pasture.

William Luker’s 1868 painting *Bloomers Meadow at Lechlade*<sup>14</sup> provides an example of the variability in recording practices apparent in the apportionments. The painting (Figure 12) illustrates haymaking at Bloomers Meadow, which is plot 759 next to the River Thames in FPM 22 Town East Meadow. The cultivation for this plot was recorded in the tithe apportionment as ‘pasture’, as are most of the plots recorded at Lechlade. The plot classed as pasture in the tithe apportionment is clearly still meadow at the time of the painting.

<sup>14</sup> <https://artuk.org/discover/artworks/bloomers-meadow-at-lechlade-135399#>.



Figure 12 Bloomer's Meadow at Lechlade (William Luker, 1868) Image: William Morris Gallery courtesy Art UK.

Consequently, plots were digitised as meadow where the following conditions were true:

- The tithe plot name indicated a relationship to meadow use; e.g., names that included mead, hay, ham, rye, lease, such as *Allotment in Water Ham* (plot 28, Inglesham).
- The tithe plot included a reference to the area having been divided into plots; e.g., names that included common, lot, or dole, such as *Dole Hams* (plot 3245, Aston and Cote).
- The tithe plot name included reference to a common or meadow, such as *Allotment in Great Meadow*. (Plot 255, Ducklington).
- The plot cultivation type was meadow or pasture – but if pasture, it had to have a meadow or common-related tithe plot name.

Rarely were arable fields located within the floodplain near the rivers, a similar pattern to that seen on the Dorset Stour. The few plots that had a tithe name related to a meadow, but their cultivation recorded as arable were mapped.

Areas of extensive doles, for example at Standlake on the Windrush, were recorded as whole areas from the tithe, rather than recording all the individual doles. This was to speed up the recording process as recording the many hundreds of doles was time consuming and adds little to the result. Many of the areas of multiple doles had the same name recorded in the tithe record for each dole. A similar pattern was seen on the Dorset Stour. The large areas of doles at Standlake between the two branches of the Windrush, were annotated on the tithe map with their names: *Middle Dole, Lower and Upper Sydenham Mead and Ealong Furlong*.

Recognising areas of doles in meadows adjacent to the river to identify potential common meadow was not as straightforward as it was on the Dorset Stour, as it seems that in some parishes, the enclosure of open fields pre-dated the tithe maps along the route of the River Thames. Consequently, earlier meadow boundaries have been incorporated into the newer large, regular enclosed field systems and can be difficult to identify.

Nonetheless, there are some places in the Thames tributaries study area where open arable fields survived and were still in use when the tithe maps were created, particularly around Aston, Cote and Bampton. Many of these open fields are outside of the floodplain and are usually marked as 'furlongs' on the tithe. These open fields are remains of the earlier medieval open field system. Although on the tithe map they can appear similar in form to the doles used for allocating meadow for hay, their boundaries are usually solid, whereas the dole boundaries are usually dotted or dashed lines.

There were many more alterations to the parish boundaries on the Windrush, Thames and Cole than was observed on the Dorset Stour. The parishes that lie next to the rivers have undergone several boundary changes throughout the 19<sup>th</sup> century, particularly along the River Windrush. During the 1850s the parish boundaries of Ducklington, Hardwick and Standlake were modified several times. These changes could make it difficult to establish the extents of FPMs, the settlement to which they were connected, and how plots were allocated between different parishes at different points in time. The approach adopted was to digitise the earliest available tithe maps in each case to capture the field/plot boundaries at the earliest point in time.

### **Rocque's Map of Berkshire published 1761**

Rocque's Map of Berkshire published 1761<sup>15</sup> consists of a series of plates of the county of Berkshire. The detail on this map includes commons, meads and the open field systems. In effect, Rocque's map is more detailed than the later OS drawings as it included field boundaries and field types such as furlongs, pasture and meadow annotated on the map. The *Twelfth (sic) Sheet of Berkshire from an Actual Survey by Jn. Roque* was particularly useful for the area from Highworth to Coleshill; indeed, without this map, FPM 24 Town Mead at Highworth would have not been identified as the tithe maps did not cover this area.

### **Victoria County History**

The Victoria County History (VCH) for Oxfordshire, *A History of the County of Oxford*, includes a series of illustrative maps in its accounts of settlements in the study area for the Thames tributaries. These maps, which are largely derived from tithe maps, include areas keyed and/or labelled as common meadows. However, these illustrations are not suitable for digitising and the method through which meadows were identified in each case is not known. Consequently, the identification of FPMs in this project was not based on the VCH maps, but the VCH maps were consulted by way of a check and are referenced accordingly in the text below. The VCH was also an important source of other information relating to the history of parishes and settlements in the Thames tributaries study areas.

### **Domesday Survey**

Information about household size and meadow acres was sourced from the online version of the Domesday survey – Open Domesday – created by Anna Powell-Smith, using data created by Professor J.J.N. Palmer and a team at the University of Hull<sup>16</sup>.

Shapefiles were created to record the settlements recorded in Domesday in the two study areas. Each settlement was mapped as a point using the parish church as the reference location. The number of households and the acreage of meadows was recorded from Open Domesday in the shapefile attributes. The points were then mapped in the GIS project to establish whether there was any pattern in the distribution of the acreage of meadows (Figure 49) or number of households (Figure 50).

It should be borne in mind that in the Domesday survey, records refer to settlements rather than parishes, so the relationship between settlements named in Domesday and the extents of modern parishes cannot be assumed. Moreover, acreage recorded in Domesday may not equate with modern acres, so the figures for acreage in Domesday are best treated as indices or proportions rather than absolute measures of area.

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<sup>15</sup> <https://www.rct.uk/sites/default/files/collection-online/1/6/475359-1409056416.jpg>.

<sup>16</sup> <https://opendomesday.org/>.



## Domesday Hundreds

Given that there is an ambiguous relationship between settlements in the Domesday survey and (modern) parishes, the option of defining study areas based on Domesday Hundreds was considered. For the Dorset Stour, the Domesday Hundreds shapefile was downloaded from the Archaeology Data Service. This dataset had been mapped as part of the Landscapes of Governance study<sup>17</sup> undertaken from 2009 to 2012 by the Institute of Archaeology at the University of Central London. Hundreds are the administrative sub-divisions of a shire and are the administrative units within which settlements are listed in Domesday (Figure 13).

Although there is a clear relationship between Hundreds and settlements in Domesday, there is some remaining ambiguity in the spatial extent of Hundreds. Moreover, addressing all the settlements within the Hundreds to achieve the same coverage of the floodplain provided by the seven parishes selected would have considerably extended this stage of the pilot.

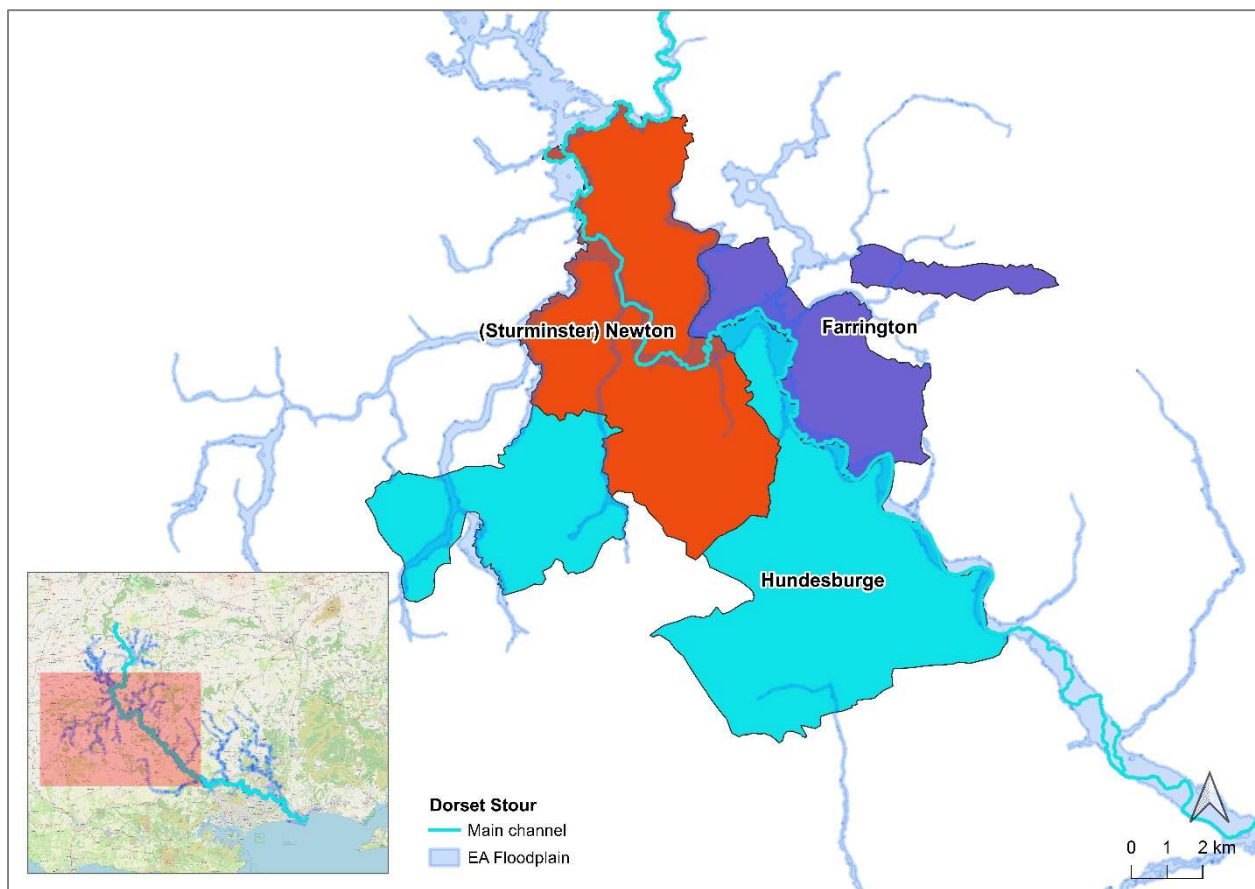


Figure 13 Domesday Hundreds (insert © OpenStreetMap contributors<sup>18</sup>).

## EA Lidar Data

The Environment Agency's lidar data<sup>19</sup> is obtained by aerial survey. The lidar scans the surface of the ground with a laser: the returning beam is used to create a detailed representation of the topography of the ground. This is represented as a Digital Terrain Model (DTM), which represents all features on the ground including vegetation and buildings; or a Digital Surface Model (DSM) which effectively ignores such surface features to represent only the underlying topography. EA lidar data is available for much of the UK at resolutions representing a cell size on the ground that

<sup>17</sup> <https://www.ucl.ac.uk/archaeology/research/landscapes-governance>.

<sup>18</sup> Base map and data from OpenStreetMap and OpenStreetMap Foundation <https://www.openstreetmap.org/copyright>.

<sup>19</sup> [https://experience.arcgis.com/experience/753ad2ebd3554fa696885b8c366c3049/page/home/?views=view\\_18](https://experience.arcgis.com/experience/753ad2ebd3554fa696885b8c366c3049/page/home/?views=view_18).

is typically 2 m, 1 m or 0.5 m square, depending on the intensity of the survey. This means that relatively small topographic features indicative of past human activity can be interpreted.

For the *Historic Watercourses: Dorset Stour* project, EA lidar data in the form of 1 m resolution DSM tiles had previously been downloaded and collated. Additionally, the data had been subject to a number of methods (detailed in Firth and Firth, 2020) that enhance the visibility of low-relief features, such as physical boundaries, drainage channels and ridge and furrow. The visualised data was incorporated into the GIS for this project. For the Thames tributaries, EA lidar was similarly downloaded, collated and processed so that it was available for this study area also.

## Archaeological Data

Some archaeological data layers were included in the project GIS to provide additional context and, in some cases, information directly relevant to the identification of FPMs. Data from the Historic Environment Record (HER) for Dorset was already available via the earlier *Historic Watercourses: Dorset Stour* project; and data for designated heritage assets (e.g. scheduled monuments – SMs) was available for both study areas as downloads from Historic England<sup>20</sup>. Archaeological sites from these sources were referenced as ‘associated monuments’ in the record for each FPM: in the text below, links are provided to the National Heritage List for England (NHLE)<sup>21</sup> using the relevant List Entry Number (LEN). Where these date to earlier periods, they underline the long-standing value and inhabitation of floodplains and the potential for settlements and other activity sites in areas subsequently characterised by meadow and pasture.

### 3.6. Identification of Floodplain Meadows

Having collated the base mapping and historical sources above, which included extensive georeferencing and digitising for some sources, individual floodplain meadows were identified and recorded.

The identification of FPMs was made according to the presence of certain diagnostic features that, in combination, indicate floodplain meadows formerly managed as commons:

- The FPM is situated mostly in the modern floodplain.
- The FPM has a funnel-shaped entrance, usually coming off a driveway or a trackway leading from a settlement.
- One of its boundaries (usually the longest) is bounded by the river, while two sides flare out from the funnel-shaped entrance.
- On tithe maps, the FPM is subdivided into doles (apportioned strips that were assigned to individuals) that respect the irregular nature of the boundaries of the FPM but are themselves regular and usually of either an acre, half an acre or quarter of an acre.
- The state of cultivation recorded in the tithe apportionment is usually either meadow or pasture, but very rarely arable.
- Where there are enclosed fields within the extent of the FPM, these fields are in strip form (reflecting doles) and in the tithe apportionment they have plot names such as mead or ham.
- Areas of withy beds may be incorporated within the funnel-shaped meadow.
- There may be more than one funnel-shaped entrance.

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<sup>20</sup> <https://historicengland.org.uk/listing/the-list/data-downloads>.

<sup>21</sup> <https://historicengland.org.uk/listing/the-list/>.

The decision to identify an area as an FPM required at least three of the diagnostic features listed above to be present (Figure 14).

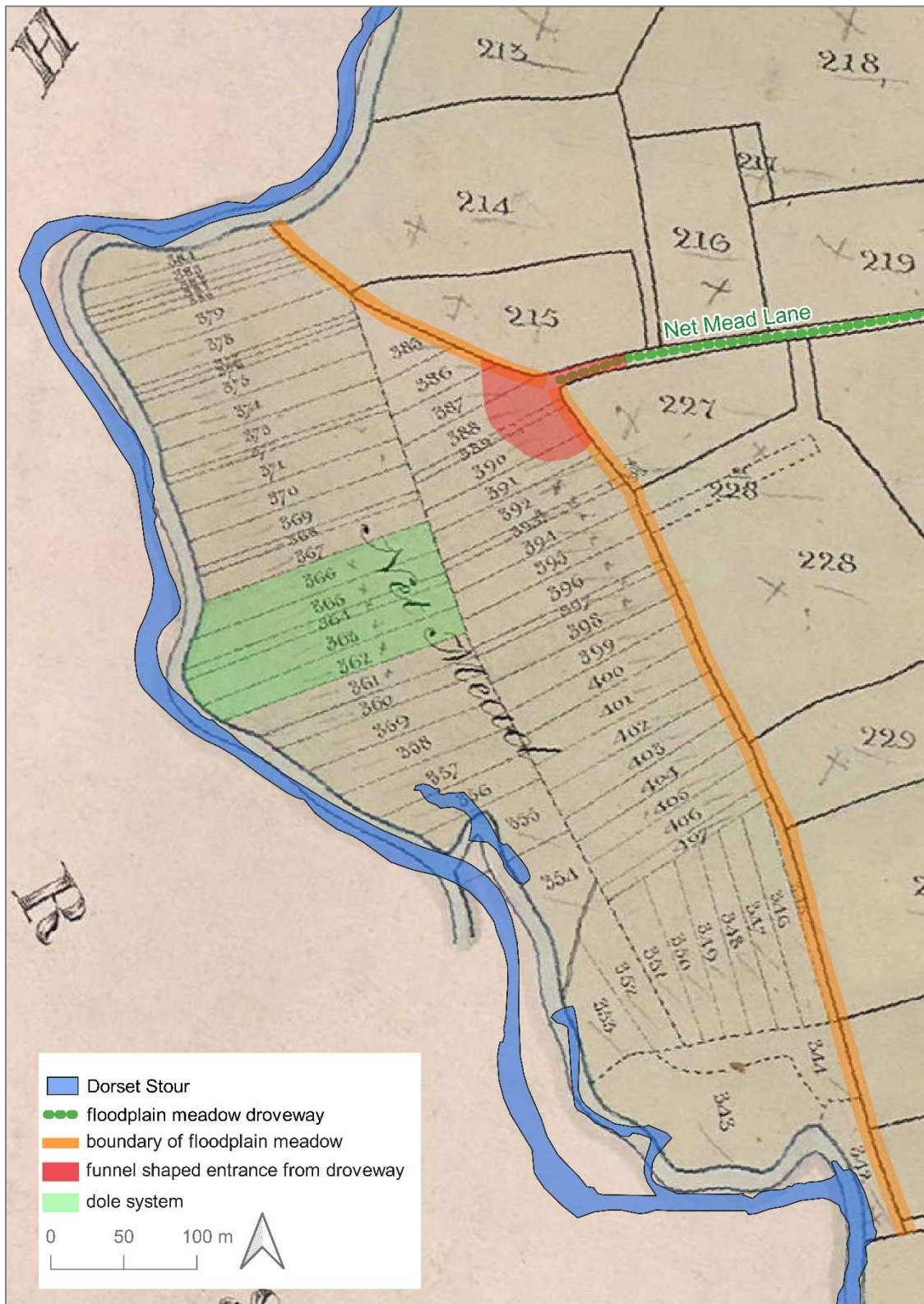


Figure 14 Diagnostic features that indicate floodplain meadows formerly managed as commons. Floodplain meadow illustrated is FPM 21 Net Mead at Child Okeford (Dorset History Centre reference T/CHO – Child Okeford Tithe Map, 1840)

It was felt that identification of FPMs could not be made on the basis that all fields within the floodplain could be regarded as floodplain meadows historically. The extent of the (modern) floodplain within each parish can be represented easily using a shapefile derived from the EA's Risk of Flooding from River and Sea data, but it was considered that the identification of areas



having originated as floodplain meadows managed as commons needed to be based on some physical or mapped historical evidence of such an origin. Hence the extent of FPMs as mapped here need not equate to the extent of (former) meadows in floodplains.

Plot names and state of cultivation recorded in the apportionments accompanying tithe maps are excellent historical pointers from the 1840s indicating former land use. However, the exercise of digitising plots across the entire parish of Sturminster demonstrated that neither the 1840s state of cultivation nor the plot names – or even the practice of subdividing fields into doles -- were solely associated with floodplain meadows. Consequently, it was determined that the identification of floodplain meadows could not be interpreted from plot name or state of cultivation alone.

Whilst it is possible that meadows akin to floodplain meadows might have been maintained outside the floodplain by manipulating very small watercourses or springs, trying to identify these would require sources of data on ground conditions (e.g. locations of springs) that were not readily available and would extend the terms of the project significantly. Meadows outside the floodplain would also lack the defining characteristic of being subject to river flooding rather than some other form of irrigation.

In terms of chronology, it is not possible to put firm from/to dates on the FPMs that have been identified. Their identification is based on the FPMs being sufficiently persistent in the landscape for their boundaries to be both evident in historic maps or lidar, and for their form to have influenced the pattern of later boundaries. Consequently, the FPMs can be generally attributed to the (early) medieval to post-medieval/modern periods. However, whilst the individual pieces of evidence – such as tithe maps and apportionments – may have reasonably precise dates, each piece of evidence is only a point in time. The FPMs interpreted from these instants plainly have considerable longevity, but detailing their individual histories would require further detailed documentary, archaeological and/or palaeo-environmental examination.

## 4. Results: Dorset Stour

### 4.1. Overview

A total of 28 FPMs were identified during this study, of which three are not discussed further as they were located outside the study area presented by the seven selected parishes (FPMs 1 and 3 at Stour Provost and FPM 2 at Gillingham, indicated on the 1808 OS drawings). Their identification – as with the enhancement within the study area – suggests that the finer-grained approach developed for this project would lead to the identification of more FPMs in the overall Stour catchment than mapped during the *Historic Watercourses: Dorset Stour* project.

The remaining 25 FPMs are all located in the selected parishes (Figure 15). This figure also shows the original HWP that were identified during the *Historic Watercourses: Dorset Stour* project (Firth and Firth, 2020). Droveys to the meadows were also identified either from tithe maps or the OS drawings and are included in this illustration, underlining the relationship between the FPMs, the movement of livestock (for after grazing), and each parish/settlement as a whole.

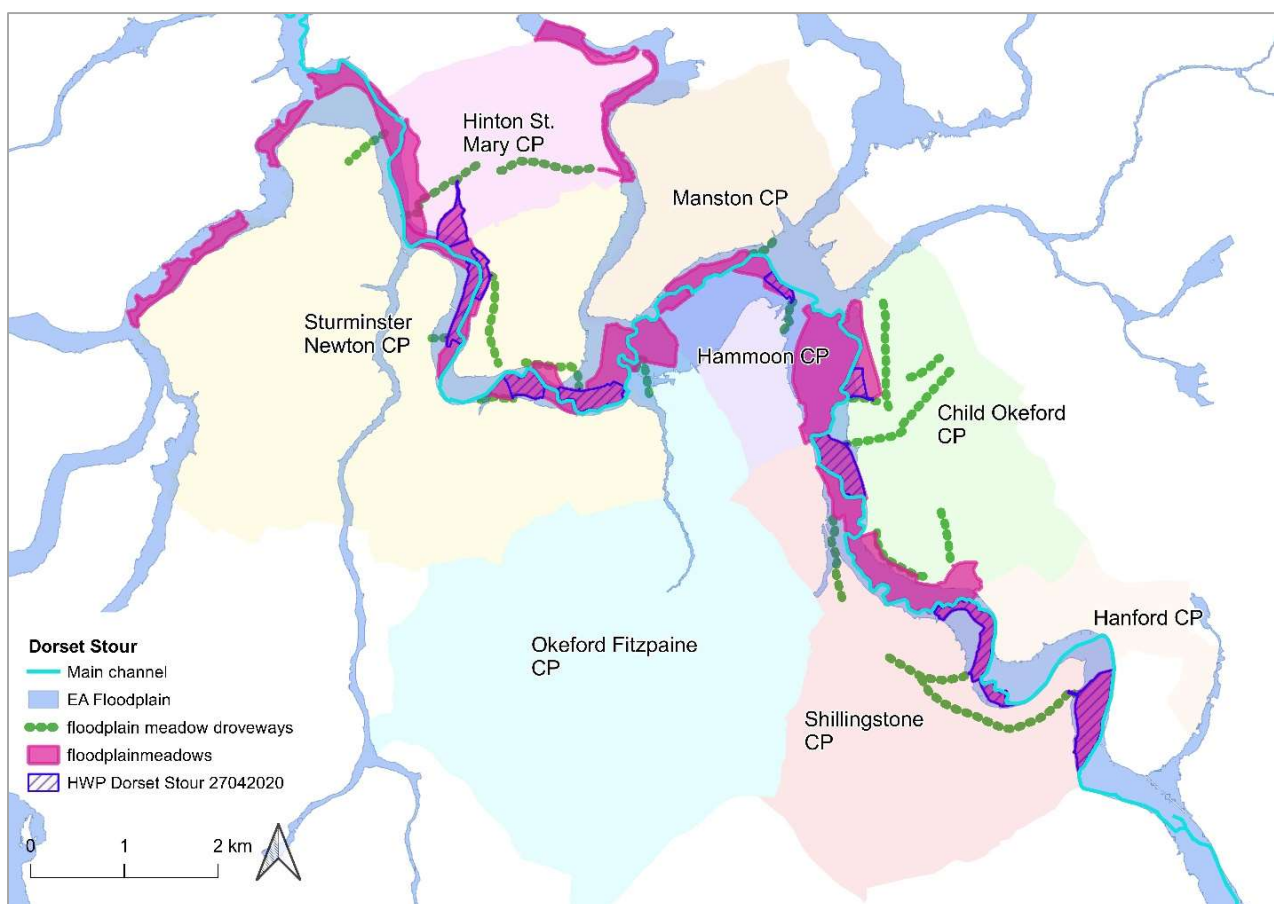


Figure 15 FPMs (purple) identified along the Dorset Stour. Droveys are marked in green.

Using QGIS the area of the modern floodplain (based on EA area at risk of flooding), parishes, FPMs and tithe plot shape files were used to calculate:

- the percentage of each parish that is within the modern floodplain,
- the percentage of each parish within the floodplain that has been interpreted as FPM,
- the percentage of each parish within the floodplain where tithe plot cultivation type is recorded as 'meadow'.

While calculating the percent of parish within the modern floodplain was straightforward, calculating this for the FPMs and the tithe plots recorded as meadow was slightly more complicated. The FPMs and tithe meadows are not always situated fully within the area of the

modern floodplain, therefore a method was used that divided the floodplain, tithe plots and FPM polygons into segments that could be used to provide the above information. Using a Union query, a polygon was calculated for the area of the modern floodplain where there were no tithe plot segments recorded as 'meadow'. This polygon could then be subtracted from the total area of the modern floodplain covering the parish; resulting in the total area of tithe plots where cultivation was recorded as meadow within the floodplain. Using this, percentages could be then calculated. The same method was used for calculating the percentage of FPM area within the floodplain for each parish. Table 2 summarises the results of these calculations.

Settlement	Parish	Parish			Flood Plain Meadows				Tithe plot in floodplain where cultivation type is 'meadow'	
		Parish Acre	Parish in Floodplain acre	% of parish in floodplain	FPM Acre	% of parish that is FPM	Acres of floodplain that is FPM	% Floodplain that is FPM	Acres of 'meadow' within floodplain	% of land in floodplain that is tithe meadow
Colber	Sturminster Newton	4547.9	742.0	16	42.8	0.9	301.5	41	355	48
Bagber					125.2	2.8				
Newton					155.9	3.4				
Hinton St. Mary	Hinton St Mary	1070.3	102.2	10	166.6	16	87.2	85	61	41
Manston	Manston	1374.4	287.7	21	30.7	2.2	28.7	10	193	67
Hammoon	Hammoon	693.2	392.2	57	190.8	22.3	187.1	48	171	44
Okeford Fitzpaine	Okeford Fitzpaine	3742.6	104.1	3	50.7	1.4	50.7	49	29	28
Child Okeford	Child Okeford	1604.2	193.7	12	211.9	13.1	143	74	140	72
Shillingstone	Shillingstone	2272.9	306.9	14	144.9	6.4	141	46	162	53

Table 2 Summary table showing Parish, FPM and Tithe Meadows presenting acreage of each and its relative proportions within the modern floodplain.

#### 4.2. Sturminster Newton

The largest parish in this study, Sturminster Newton covers an area of 4547.9 acres. Of this, 742 acres (16% of the area of the parish) is within the modern floodplain (Figure 16). A total of 323.9 acres (7.1% of the area of the parish) was identified as lying within FPMs and these meadows occupy 41% of the floodplain. Domesday records two settlements in this parish, whilst a third at Bagber was not recorded in Domesday but is a known medieval settlement.

The 19<sup>th</sup> century tithe apportionment records a total of 592 acres of tithe plots across the whole parish where the cultivation type is recorded as 'meadow'. Of these tithe plots, 355 acres lie within the modern floodplain, indicating that 48% of the floodplain within the parish was meadow at that time.

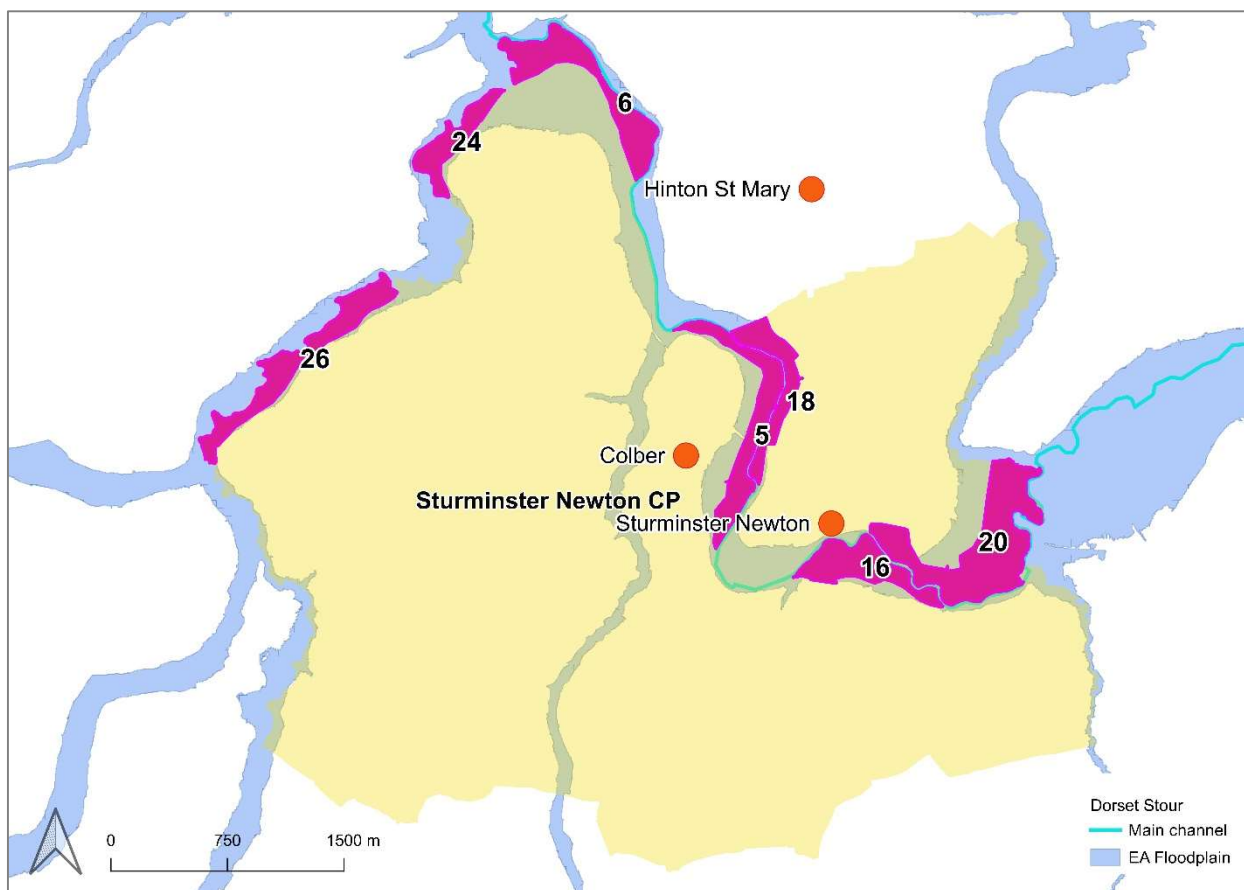


Figure 16 Location of FPMs identified at Sturminster Newton.

#### **FPM 5 Floodplain meadow Benditch Mead and Press Mead at Colber Farm, Sturminster Newton**

The first settlement is the deserted medieval farmstead at Colber<sup>22</sup>, which has 111 acres of meadow and 28.7 households recorded in Domesday. Colber has over 50% less acreage of FPM identified than that recorded during the Domesday survey, with a total of 42.8 acres within a single potential FPM. The FPM does not extend entirely across the modern floodplain; its extents have been interpreted from the doles mapped on the tithe map and the 1808 OS drawings and it is possible that this boundary is too conservative. However, the high acreage value recorded in Domesday for Colber refers to multiple places, consequently it is considered likely that the 111 acres recorded as meadow were not all located in the vicinity of the now-deserted settlement/farmstead of Colber.

This FPM is near the medieval farmstead of Colber and includes both Benditch Mead and Press Mead (1808 OS drawing) and covers 42.8 acres. The tithe map shows multiple strip fields, indicative of a former medieval common meadow. The doles on the tithe map line up with extent of the floodplain. There is a funnel-shaped entrance on drove/lane from Stalbridge Lane.

Associated monuments: HER Colber Medieval settlement to the west of Sturminster Newton.

Source: Tithe map T-SN Sturminster Newton; 1808 OS drawing; Epoch 1 25" OS.

#### **FPM 16 Floodplain meadow at Sturt Mead, Sturminster Newton**

Further south along the Dorset Stour is the second medieval settlement of Newton<sup>23</sup> recorded in Domesday as having 82 acres of meadow and a population of 90 households. 155.9 acres of FPM were identified at this settlement. The settlement at Newton has approximately 50% greater

<sup>22</sup> <https://opendomesday.org/place/ST7714/colber/>.

<sup>23</sup> <https://opendomesday.org/place/ST7813/sturminster-newton/>.

acreage of FPM compared to meadow acreage recorded in Domesday. This difference could be accounted for by increasing population numbers since the Domesday survey of 1086 as the expansion of the settlement through the medieval period may have resulted in more common meadow. The boundary of Sturminster Newton parish has moved, with a strip of land between Fiddleford and Hammoon parish becoming incorporated into Okeford Fitzpaine. This area has a potential FPM, which would originally have been located within the parish of Sturminster Newton.

FPM 16 is east of Sturminster Newton and called 'Stear Mead' (meaning tongue of land between two branches of a stream) covering an area of 37.3 acres. Multiple strip fields are marked on the tithe map. The tithe map records multiple doles at both Stear Mead and Little Sturts Mead, which could have one of two entrances on a lane coming out of Newtown, but neither are properly funnel-shaped.

Source: Tithe map T-SN Sturminster Newton.

#### **FPM 18 Floodplain meadow Maize Brinsley Mead and Dockhams Mead at Sturminster Newton**

Tithe plots 513/613 Maize Brinsley Mead and 508 Dockhams Mead might indicate a former FPM of 27.2 acres. No doles are recorded on the tithe map. The FPM is reached by a funnel-shaped entrance off the Sturminster Newton to Bath road.

Source: 1808 OS drawing shows three large fields.

#### **FPM 20 Floodplain meadow Southly Mead at Sturminster Newton**

FPM 20 is marked on the tithe map as Southly Mead divided into multiple doles covering 91.5 acres. Southly Mead is adjacent to Ham Mead and extends around via Broad Mead, Fiddleford Meads and Lily's Mead. It is accessed from a drove/lane from Sturminster Newton and has a funnel-shaped entrance.

Associated monuments: HER Fiddleford Mill; MDO4863 ridge and furrow.

Source: Tithe map T-SN Sturminster Newton; 1808 Shaftesbury OS drawing.

#### **FPM 6 Floodplain meadow Kings Mead, Bagber**

A medieval settlement at Bagber, with open fields, is known but was not recorded in Domesday. This accounts for there being no figure available on the chart for the meadow acreage recorded in Domesday for this settlement (see below). Three potential FPMs were identified, two of which are located near Bagber on the Dorset Stour while a third FPM was situated north of Bagber Common on the River Lyden: a tributary of the Dorset Stour. They have a combined acreage of 125.2 acres.

The tithe apportionment records FPM 6 as Kings Mill Mead, Crib Mead and Cut Mill Mead covering 51 acres. This FPM is clear on Epoch 1 25" OS. There is no evidence of a droveway or funnel-shaped entrance to this FPM.

Source: 1808 OS drawing (Sherborne); tithe map T-SN Sturminster Newton; Epoch 1 25" OS.

#### **FPM 24 Long Mead and Broad Field Mead at Bagber**

FPM 24 comprises two meads alongside of one another, visible both on the tithe map and on the Epoch 1 OS map and covering 24.5 acres. The boundary is irregular but there is no evidence of a funnel-shaped entrance; although this may be due to the railway bisecting the fields in the 19th

century. This FPM may formerly have been part of adjacent FPM 6 Kings Mead, possibly associated with medieval settlement at Bagber.

Source: Tithe map T-SN Sturminster Newton; 1808 OS drawing.

#### **FPM 26 FPM north of Bagber Common**

On the 1808 OS drawing, FPM 26 is depicted as one single area, but the tithe apportionment records several meads: Pachel Mead; Little Mead; and Great Mead. FPM 26 is located near the former medieval settlement of Bagber and covers 49.6 acres. There is no evidence of a funnel-shaped entrance.

Source: 1808 OS drawing.

### **4.3. Hinton St Mary**

Hinton St Mary covers an area of 1070.3 acres, of which 102.2 (10% of the area of the parish) is within the modern floodplain (Figure 17). A total of 166.6 acres (16% of the total area of the parish) was identified as FPM, and these meadows occupy 85% of the floodplain. The parish is bounded by the Dorset Stour to the west and by a tributary, Chiverick's Brook, to the east. The settlement of Hinton St Mary is centrally located within the parish. Domesday records a population of 28 households in 1086<sup>24</sup> and 30 acres of meadows at Hinton St Mary. All the floodplain meadows identified have funnel-shaped entrances, apart from FPM 27 where the funnel-shaped entrance may originally have been on Hinton Lane which now bisects the floodplain meadow. The 19<sup>th</sup> century tithe apportionment records 61 acres of tithe plots where the cultivation type is record as 'meadow', and these plots cover 41% of the floodplain.

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<sup>24</sup> <https://opendomesday.org/place/ST7816/hinton-st-mary/>.

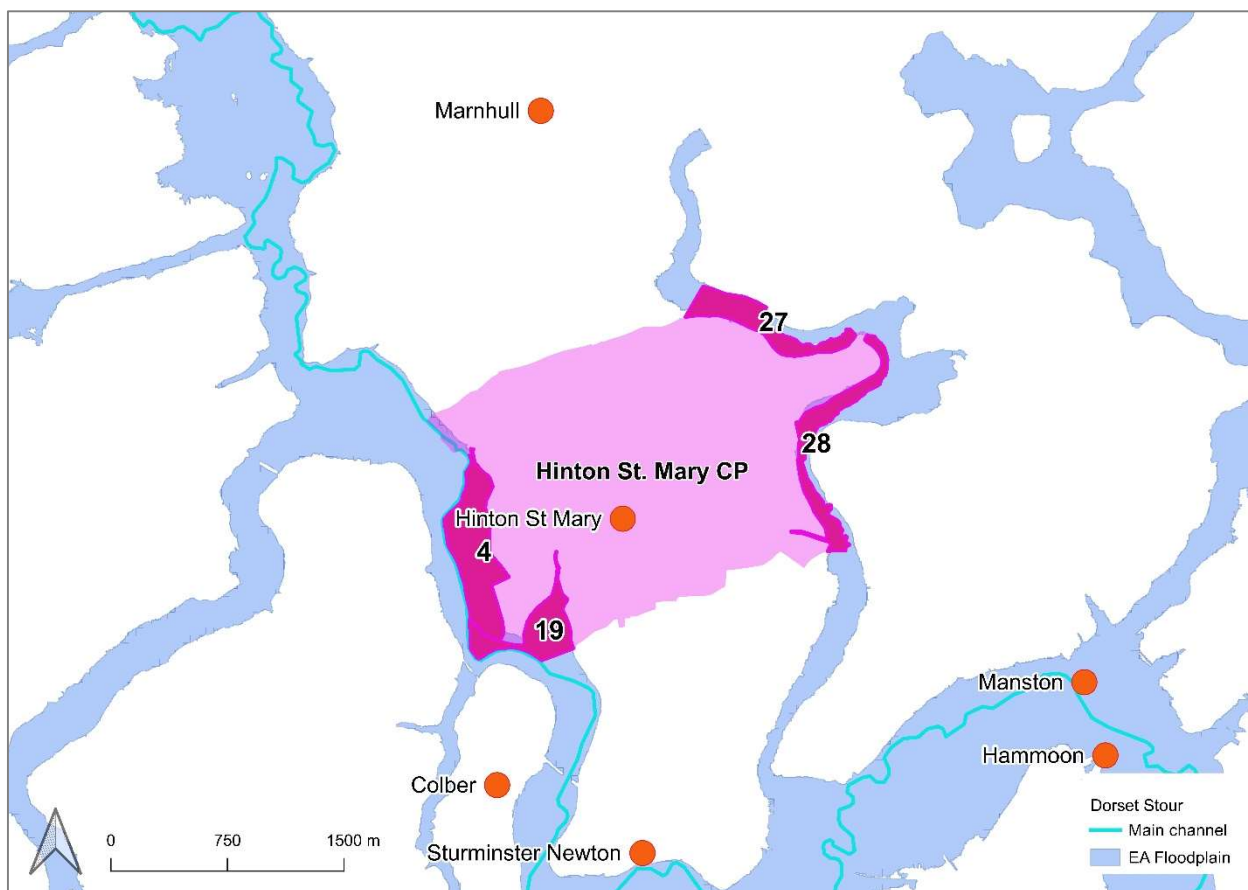


Figure 17 Location of FPMs identified at Hinton St. Mary.

**FPM 4 Floodplain meadow Small Mead at Hinton St. Mary.**

One plot in this FPM is called Small Mead and there is possibly a former funnel-shaped entrance at Cut Mill. Along the edge of the meadow the tithe map shows a lane off Woods Lane leading to plots (depicted as woods on Epoch 1 25" OS) within the FPM. FPM 4 is possibly associated with or part of the adjacent meadow at Block Hole Mead, accessed from Twinwood and covering 59.6 acres.

Source: Tithe map T-HIS Hinton St. Mary; 1808 OS drawing (Sherborne); 1808 OS drawing (Shaftesbury); Epoch 1 25" OS.

**FPM 19 Floodplain meadow near Hinton St. Mary**

The tithe map records three plots: Broad Mead and Block Hole Mead, which covering 33.4 acres, are accessed via Twinwood which lies out of the floodplain but appears to have a funnel-shaped form. The 1808 OS drawing is not conclusive: plots appear to be divided by the woods. The funnel-shaped meadow runs towards the river, but the eastern edge and the bottom edge are not entirely clear from either Epoch 1 25" OS or tithe map.

Source: Tithe map T-HIS Hinton St. Mary; 1808 OS drawing (Sherborne); 1808 OS drawing (Shaftesbury).

**FPM 27 Floodplain meadow between Moor Mead and Gardeners Mead at Hinton St. Mary**

FPM 27 comprises Moor Meach, Moor Mead, 2 Moor Corner, Hither Moor Mead, Great Moor Mead, Yonder Moor Mead and Gardeners Mead. The last plot is not within the floodplain, but the



field boundary suggests it may have formed part of the FPM. The FPM is cut by Hinton Lane. The FPM is visible on tithe/ Epoch 1 25" OS but not on the 1808 OS drawing where Gardeners Mead appears to have a funnel-shaped entrance. A stream runs through part of the FPM and there is a pond on the southern boundary. The FPM covers an area of 33.5 acres.

Source: Tithe map T-HIN Hinton St Mary; Epoch 1 25" OS.

#### **FPM 28 Floodplain meadow Chiverick Mead at Hinton St Mary**

This FPM extends around the boundary of Hinton St Mary parish, along a stream mapped on the Epoch 1 25" OS. The tithe map has a 'mead' called Long Close which joins Ridgeway Lane. The FPM is made up of multiple meads (the first being Chiverick) and covers 34.9 acres.

Source: Tithe map T-HIN Hinton St Mary; Epoch 1 25" OS.

#### **4.4. Manston**

Manston parish covers an area of 1374.4 acres, of which 287.6 acres (21% of the area of the parish) lies within the modern floodplain (Figure 18). A total of 30.7 acres (2% of the area of the parish) was identified as FPM and these meadows occupy 10% of the floodplain. The parish is bounded by the Dorset Stour to the south and by a tributary, Chiverick's Brook, to the west. Manston Brook cuts the parish in its south-east corner, which is where the settlement of Manston is found. Domesday recorded a population of 19 households in 1086<sup>25</sup> and 25 acres of meadows at the settlement of Manston. The *Historic Watercourses: Dorset Stour* project identified medieval furlongs and a possible deserted medieval farmstead (HWP 237) at Higher Manston Farm, Manston Road, from lidar. The floodplain meadow identified (FPM 11) is situated to the south of this possible deserted settlement/farmstead and is of similar size to the meadow recorded in Domesday. Although there is no clear funnel-shaped entrance to the FPM there is a footpath that leads from Lower Manston Farm to the floodplain meadow, and multiple doles present on the tithe map. The 19<sup>th</sup> century tithe apportionment records 193 acres of tithe plots where the cultivation type is record as 'meadow', and these plots cover 67% of the floodplain meadow.

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<sup>25</sup> <https://opendomesday.org/place/ST8115/manston/>.



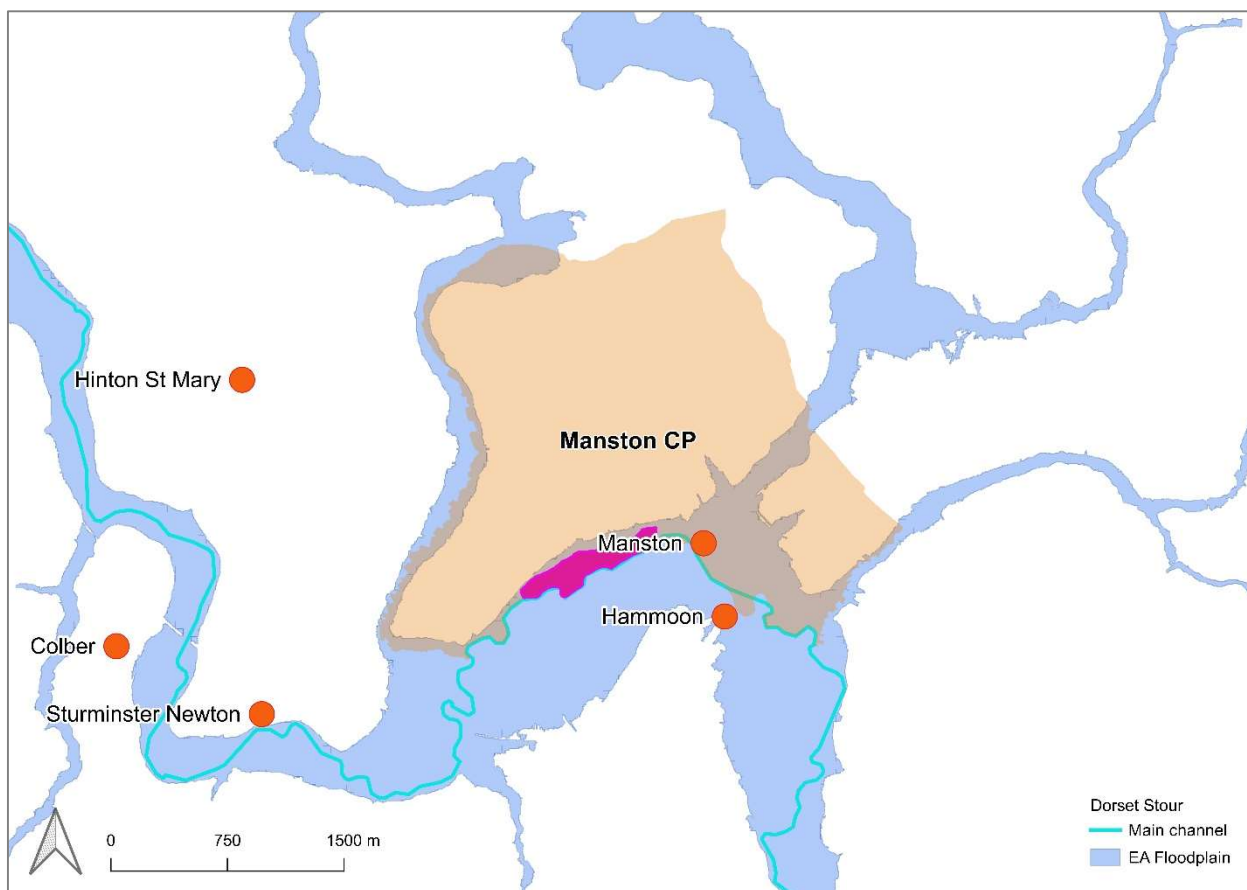


Figure 18 Location of FPMs identified at Manston.

#### **FPM 11 Floodplain meadow Stour Mead at Higher Manston**

The tithe map records doles at Londs and Stour Mead covering 29.5 acres. The 1808 OS drawing shows two fields, one is of which is shaded with dots. Lidar shows medieval field systems, ridge and furrow and a possible deserted medieval settlement immediately north of this FPM. There is a possible droveway from Lower Manston Farm to the FPM.

Source: Tithe map T-MAN Manston; ST81SWMERG COMP DTM 1M\_SLRM\_R20\_8bit; 1808 OS drawing (Shaftesbury).

#### **4.5. Hammoon**

Hammoon is one of the smaller parishes in the study area, covering an area of 693.2 acres. Of this, 392.1 acres (57% of the area of the parish) is within the modern floodplain: 190.8 acres (28% of the area of the parish) was identified as FPM and these meadows occupy 48% of the floodplain. Most of the parish is bounded by the Dorset Stour and with such a high proportion of the parish being within the floodplain, much of this area may have been suitable for use as floodplain meadow.

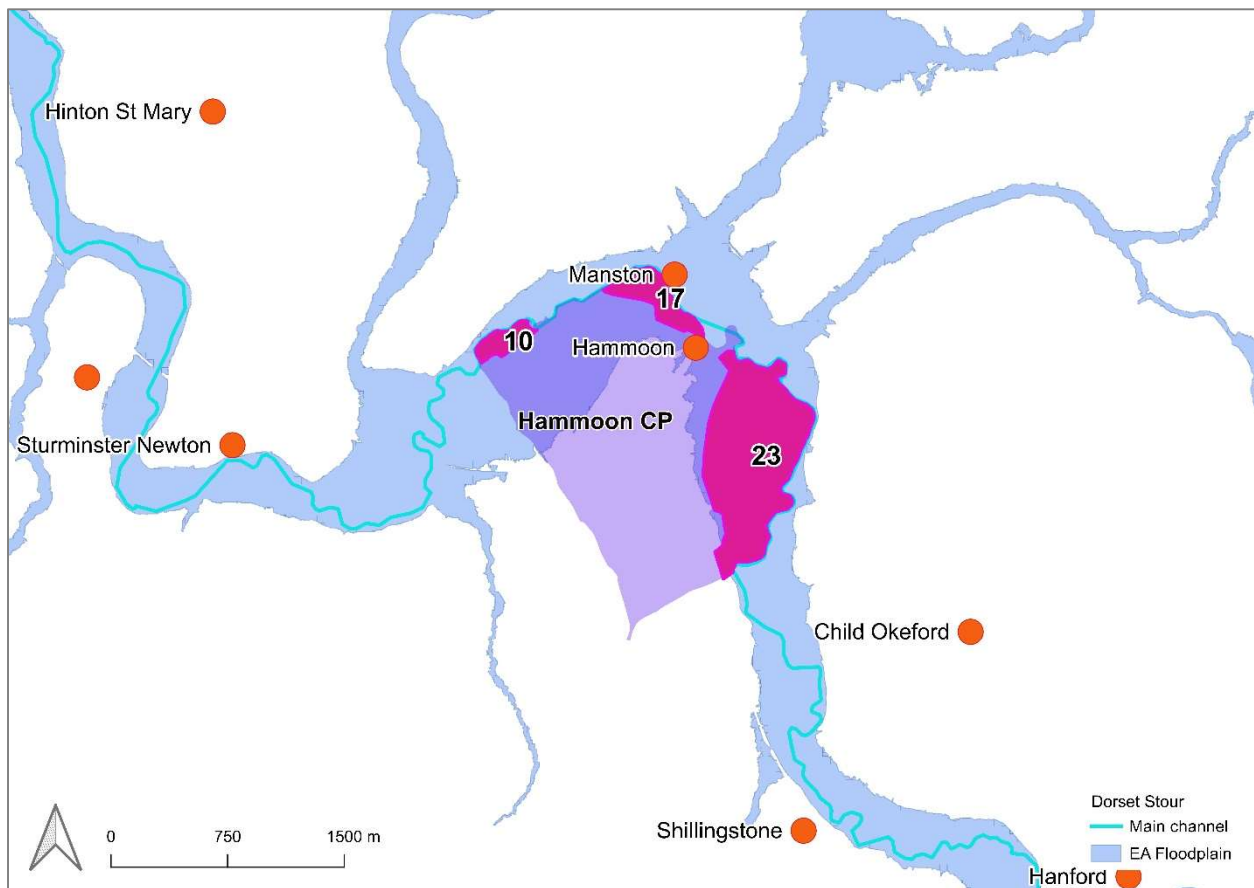


Figure 19 Location of FPMs identified at Hammoon.

Domesday records the settlement of Hammoon as having 15 households and 50 acres of meadow<sup>26</sup>. An area of medieval open fields composed of two furlongs are clearly visible in the lidar data (Figure 20) adjacent to FPM 10 Park Mead. This FPM was tentatively identified as an FPM as there is neither a funnel-shaped entrance nor a driveway leading to it. It was identified based on the names of the plots recorded on the tithe map and is interesting as there are fords at each end (Figure 21). Neither ford appears to link to a path or driveway, but one does cross into FPM 11 Stour Mead in Higher Manston. The 19<sup>th</sup> century tithe apportionment records 171 acres of plots where the cultivation type is record as 'meadow', and these plots cover 44% of the floodplain meadow.

<sup>26</sup> <https://opendomesday.org/place/ST8114/hammoon/>.

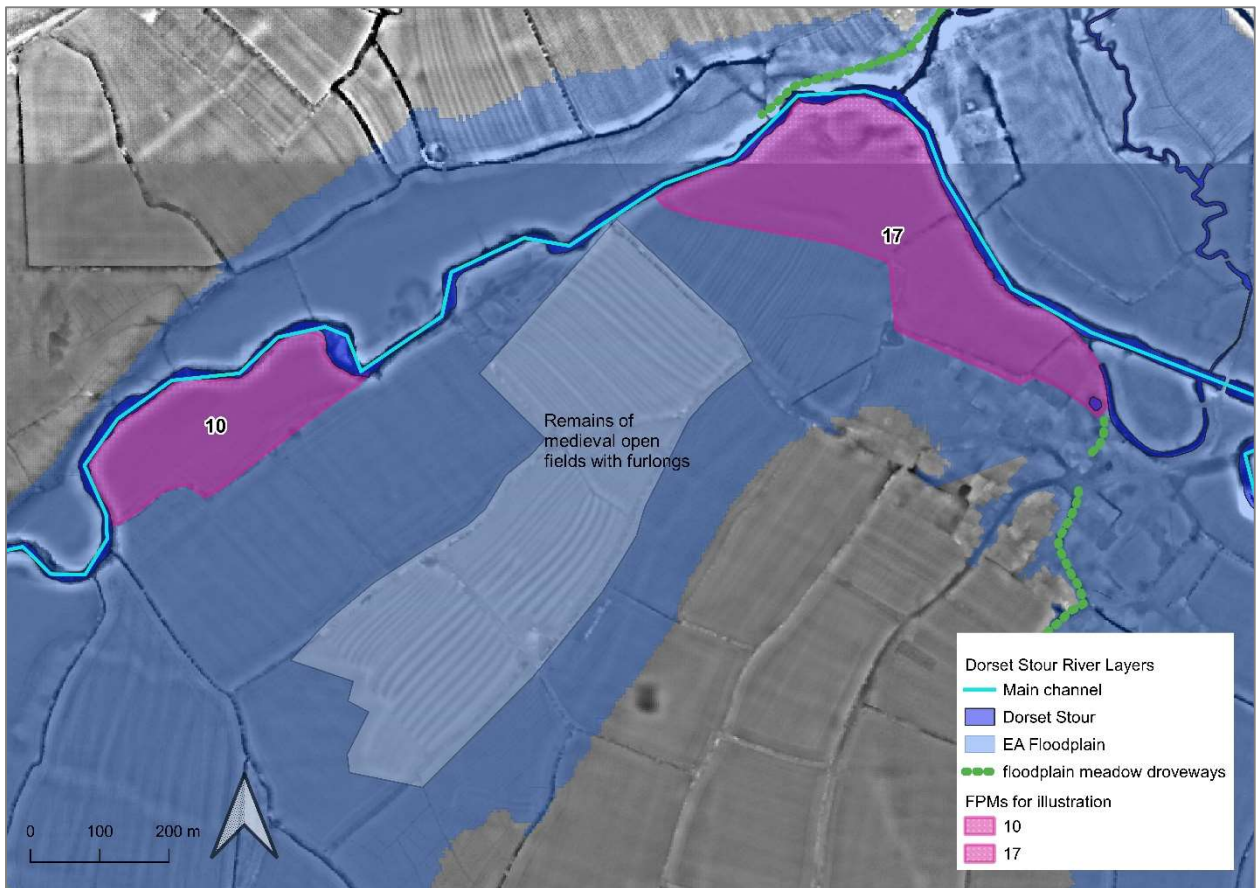


Figure 20 Lidar showing FPM 10 Park Mead and FPM 17 tithe plots include Little Norton or Ham, Town Mead and Crane Mead adjacent to area of the Manor House. The entrance is possibly across a plot described as waste to river. Lidar shows area of medieval furlongs (open field system). Red outline defined the parish boundaries of Hammoon.

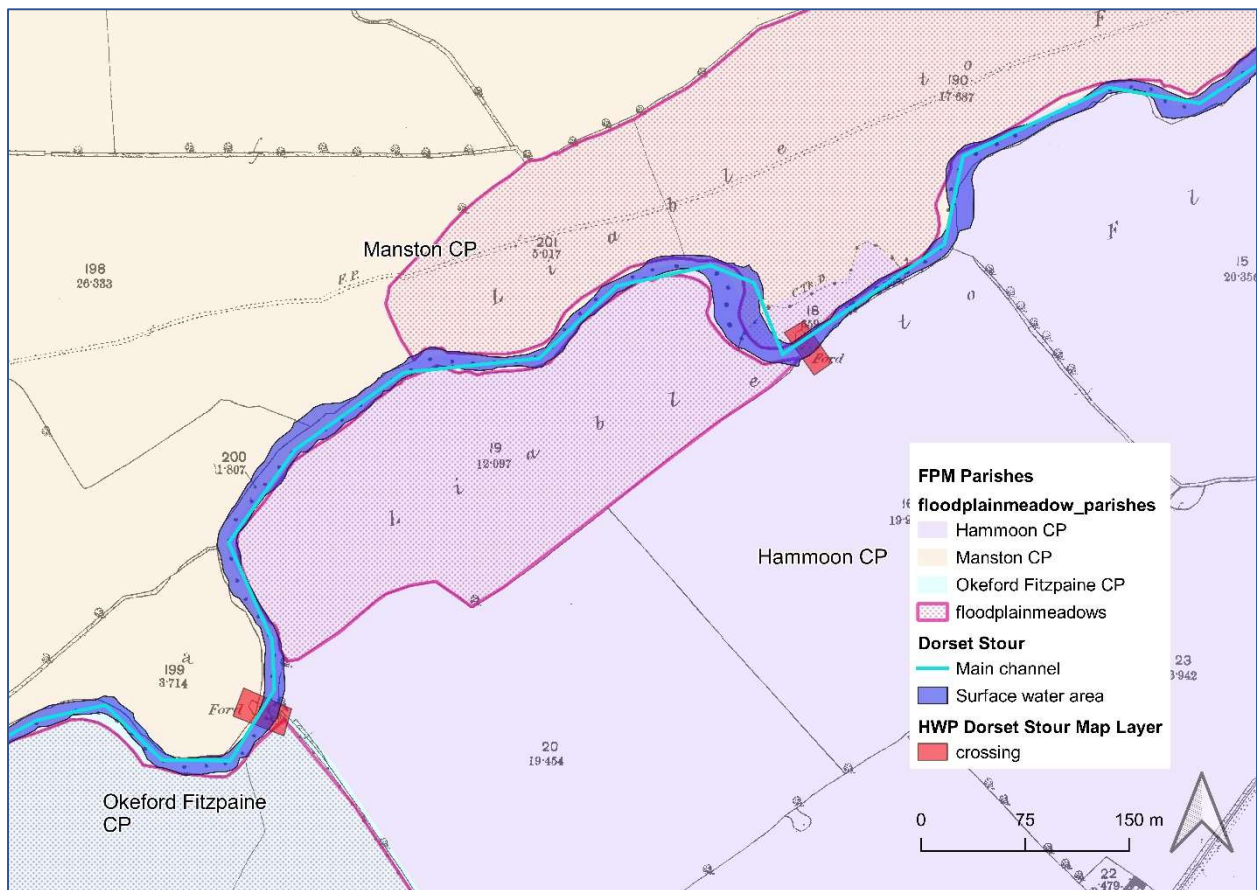


Figure 21 FPM 10 Park Mead, Hammoon, showing fords at either end.

### FPM 10 Floodplain meadow Park Mead, Hammoon

Park Mead with fords at either end, covering 12.1 acres. Lidar shows medieval ridge and furrow in the adjoining fields but no driveway or funnel-shaped entrance to the meadow from the settlement at Hammoon. Holloway down to the southerly ford – but not from settlement.

Source: Tithe map T-HAM Hammoon; ST81SWMERG COMP DTM 1M\_SLRM\_R20\_8bit; Epoch 1 25”.

### FPM 17 Possible floodplain meadow at Hammoon

Possible funnel-shaped meadow coming from the centre of Hammoon covering 24.6 acres. Situated in an area that later formed the rectory and an orchard. Configuration suggests the possibility of a former medieval common meadow although it is difficult to confidently identify the furthest extents. Tithe plots include Little Norton or Ham, Town Mead and Crane Mead adjacent to area of the Manor House. The entrance is possibly across a plot described as waste to river.

Source: Tithe map T-HAM Hammon.

### FPM 23 Floodplain meadow at Hammoon

Large floodplain meadow, which includes Parsonage Mead, Inland Meadow, Inn Meadow, West Furlong Meadow, Higher Brackey Mead, Lower Brackey Mead, Rushy Mead, Parsonage Field, Everlands, Oxen Lease and Ham Down. No funnel-shaped entrance and covers 154.2 acres.

Source: Epoch 1 25” OS; Tithe map T-HAM Hammoon.



#### 4.6. Okeford Fitzpaine

The parish of Okeford Fitzpaine covers an area of 374.2 acres, of which 104.1 acres (3% of the area of the parish) lies within the modern floodplain (Figure 22). A total of 50 acres (1% of the area of the parish) was identified as FPM and these meadows occupy 49% of the floodplain. As mentioned previously, Fiddleford was at one time within the parish of Sturminster Newton but now is within the parish of Okeford Fitzpaine and is shown as such on the tithe map. The 19<sup>th</sup> century tithe apportionment records 29 acres of tithe plots where the cultivation type is record as 'meadow', and these plots cover 28% of the floodplain meadow. The Darknell Brook runs centrally through the parish until it reaches the settlement of Okeford Fitzpaine to its east.

Domesday recorded the settlement of Okeford Fitzpaine as having a population of 40 households in 1086<sup>27</sup> and 21 acres of meadows. Only a single floodplain meadow was identified near Fiddleford Mill although it is possible that the Darknell Brook may have been used to flood areas closer to Okeford Fitzpaine; unfortunately, evidence for any FPM in this area was not identifiable.

The discrepancy between the acreage of FPM identified at the settlement of Okeford Fitzpaine during the study compared to that recorded in Domesday is probably attributable to the fact that this area of the parish was originally part of the Sturminster Newton. The FPM may have been associated with the medieval settlement at Newton, or even possibly at Fiddleford where a mill (but no settlement) is mentioned in Domesday.

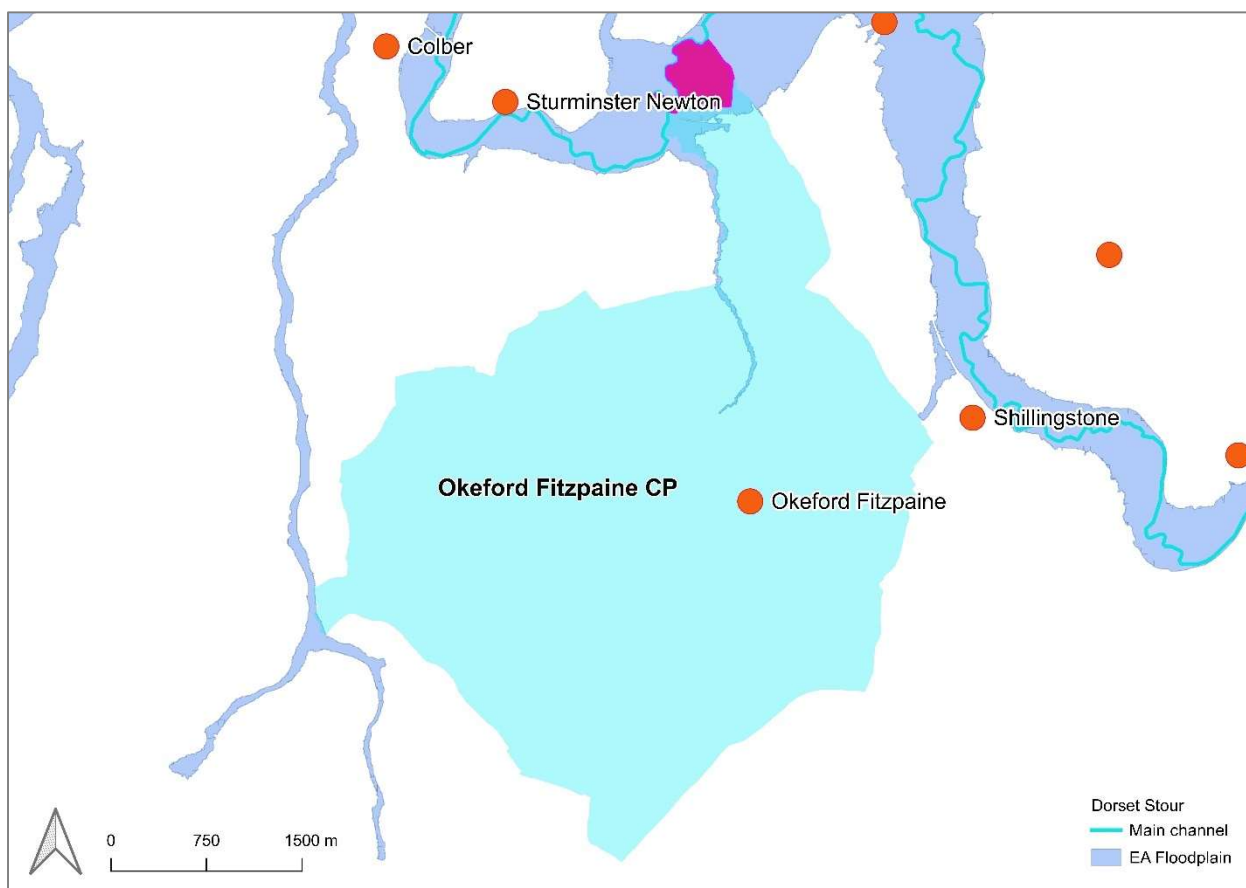


Figure 22 Location of FPMs identified at Okeford Fitzpaine.

#### FPM 8 Floodplain meadow Sedge and Fiddleford Mead at Fiddleford

The tithe apportionment records numerous meads including Sedge Mead, Leaze Mead and Fiddleford Mead. There is a droveway and funnel-shaped entrance from Fiddleford to Sedge Mead, as shown on the 1808 OS drawing. This FPM covers 50.8 acres.

<sup>27</sup> <https://opendomesday.org/place/ST8115/manston/>.



Source: Tithe map T-OFP Okeford Fitzpaine; 1808 OS drawing (Shaftesbury).

#### 4.7. Child Okeford

The parish of Child Okeford covers an area of 1604.2 acres, of which 193.7 acres (12% of the area of the parish) lies within the modern floodplain (Figure 23). A total of 211.9 acres (13% of the area of the parish) was identified as FPM and these meadows occupy 74% of the floodplain. Child Okeford is bounded by the Dorset Stour to its east, and Fontmell Brook to the north; the settlement is situated centrally within the parish in the shadow of Hambledon Hill. Field systems on both the OS 1880 Survey Drawing and the tithe map echo earlier field systems; there are commons with funnel-shaped entrances and former droves interlinking them. The 19<sup>th</sup> century tithe apportionment records 140 acres of tithe plots where the cultivation type is record as 'meadow', and these plots cover 72% of the floodplain meadow. Much of the floodplain next to the Dorset Stour was identified as potential FPM, with the best example being Net Mead which lay to the west of Child Okeford and accessed via a droveway called Net Mead Lane. The lidar data shows the remains of medieval open field systems, with the remnants of furlongs visible next to Net Mead Lane and in another field in this area to the west of Child Okeford. Domesday records 80 acres of meadows held between two owners, and that there were 39 households.

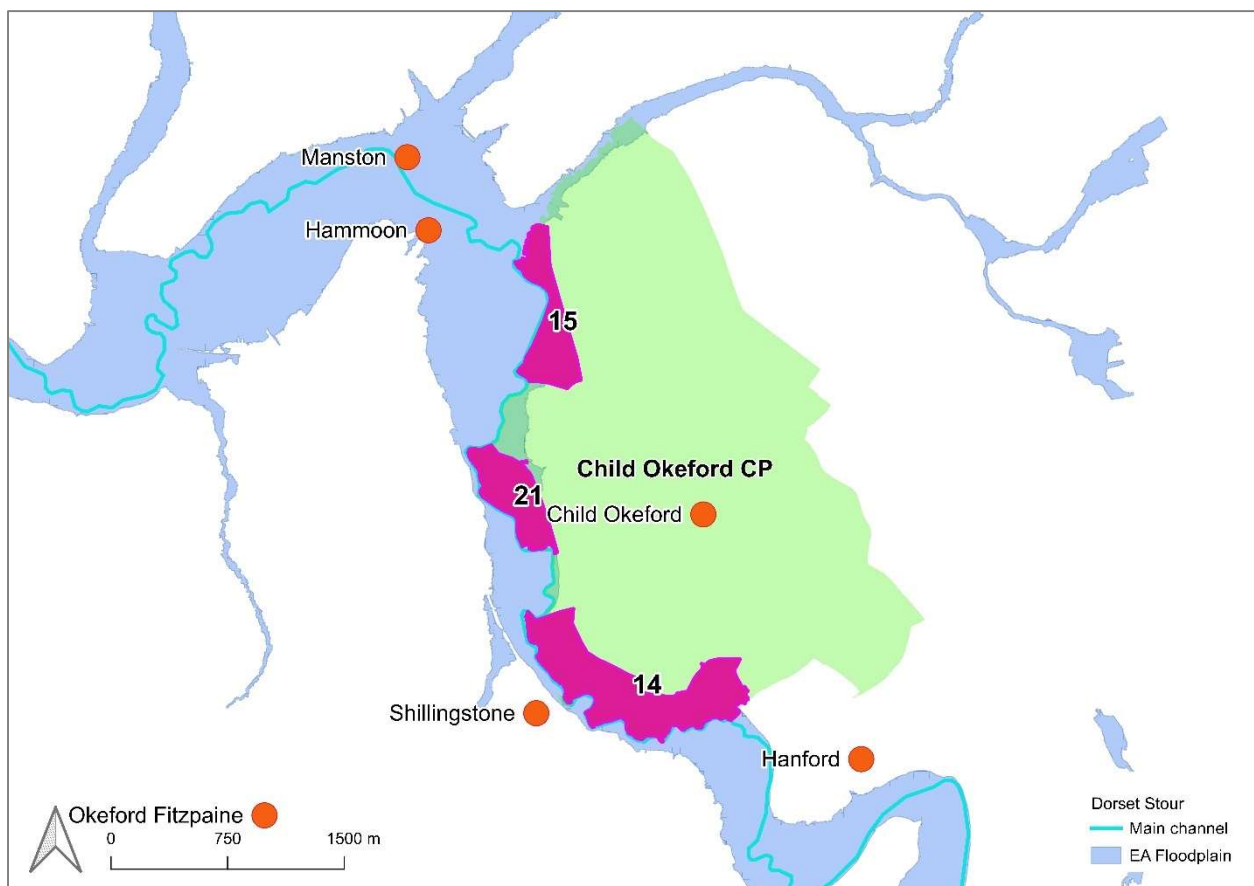


Figure 23 Location of FPMs identified at Child Okeford.

#### FPM 14 Floodplain meadow off Hayward Lane, Child Okeford

The tithe map shows several meads next to and back from the river and covering an area of 117.5 acres. South Field Lane and Mill Lane lead to this FPM. The 1808 OS drawing shows a slightly smaller area with the only entrance at South Field Lane, indicating that the Mill Lane entrance is later.

Source: Tithe map T-CHO Child Okeford; 1808 OS drawing (Shaftesbury).

**FPM 15 Floodplain meadow at Lower/Okeford Common, Child Okeford Brackey Meads and Fontmell Mead.**

FPM 15 is adjacent to Okeford Common (Epoch 1 called Lower Common) with which it shares a funnel-shaped entrance. It is west of Brickworks at Gold Hill, at the end of driveway named Green Lane Child Okeford. FPM 15 covers an area of 49.4 acres.

Associated monuments: HER MDO3723 Green Lane, Child Okeford.

Source: Dorset\_PreWar\_2500\_Epoch1 ST8\_b; 1808 OS drawing (Shaftesbury).

**FPM 21 Floodplain meadow Net Mead at Child Okeford FPM named as Net Mead, Child Okeford near Gold Hill, Child Okeford.**

This FPM displays all the features – funnel-shaped entrance off a driveway, irregular boundaries, bounded by the river, divided into doles – to confidently identify it as an FPM (Figure 59). FPM 21 covers an area of 45 acres. The funnel-shaped entrance is accessed from Net Mead Lane. Ridge and furrow is visible in the lidar data in nearby fields.

Associated monuments: HER Net Mead Lane, driveway.

Source: ST81SWMERG COMP DTM 1M\_SLRM\_R20; tithe map T-CHI Child Okeford; Epoch 1 25" OS; 1808 OS drawing (Shaftesbury).

#### **4.8. Shillingstone**

The parish of Shillingstone covers an area of 2272.9 acres, of which 307 acres (14% of the area of the parish) lies within the modern floodplain (Figure 24). A total of 144.9 acres (6% of the area of the parish) was identified as FPM and these meadows occupy 46% of the floodplain. The Dorset Stour runs the entire length of the parish of Shillingstone, with the settlement located centrally. Three FPM were identified, all with drives leading to them. FPM 22, overlooked by Hod Hill on the opposite side of the Dorset Stour, is similar in form to FPM 21 Net Mead in Child Okeford and the tithe map shows this area covered in multiple doles. The 19<sup>th</sup> century tithe apportionment records 162 acres of tithe plots where the cultivation type is record as 'meadow', and these plots cover 53% of the floodplain meadow. In the 19<sup>th</sup> century, the Somerset and Dorset Joint Railway divided the parish along its length.

Domesday records 183 acres of meadow and 46 households. There is some evidence of medieval open field systems in the south and east of the village, where furlongs are visible on lidar.

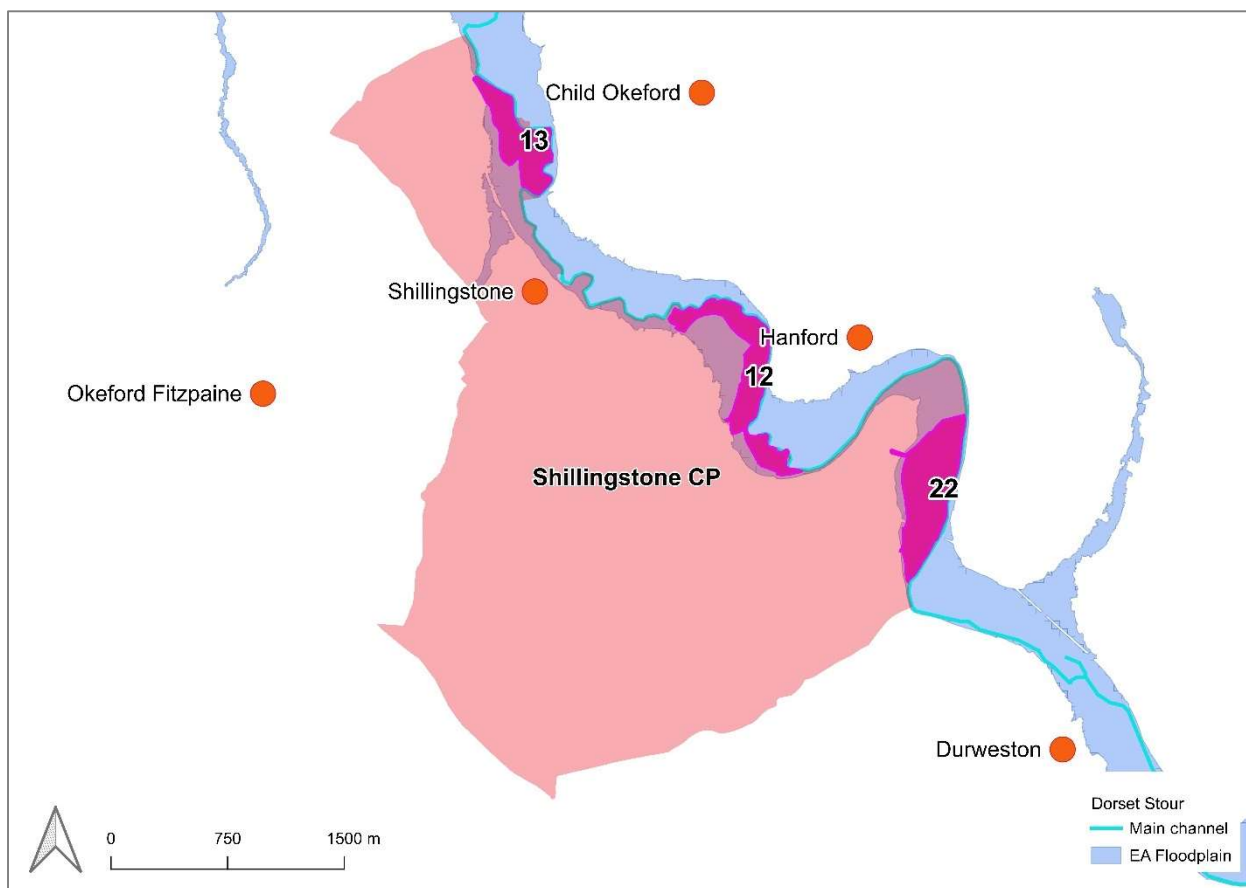


Figure 24 Location of FPMs identified at Shillingstone.

#### **FPM 12 Floodplain meadow at the end of Hollow Lane, Shillingstone**

FPM 12 has been identified from the tithe map and covers 48.2 acres. There are multiple doles, several with *mead* in their name (Hollow Long Mead, Lower Long Mead). Hollow Lane runs down to Hanford's Ford via this meadow. On the tithe map there is a funnel-shaped meadow coming off the end of Hollow Lane from Shillingstone.

Source: Tithe map T-SHI Shillingstone; Epoch 1 25" OS.

#### **FPM 13 Possible floodplain meadow at Bere Marsh**

Tentatively identified as an FPM at Bere Marsh Mill, possibly associated with the moated site that lies west of Bere Marsh Farm. The western extents were identified from lidar; entrance is thought to be from the south of site (now under the former railway) but no funnel-shaped entrance was identified. FPM 13 covers an area of 34.6 acres.

Source: Tithe map T-SHI Shillingstone; Epoch 1 25" OS.

#### **FPM 22 Floodplain meadow at Hod Moor, opposite Hod Hill**

FPM 22 has multiple doles all named Hod Moor and covers 60.9 acres. It has a funnel-shaped entrance and lane coming out of Shillingstone, marked on OS 1808 drawing as Gains Cross. At the southern end of this meadow is a property called 'Enford Mead' where there is a second entrance. Both entrances are depicted on the tithe map.

Associated monuments: Hod Hill Iron Age hillfort.

Source: Tithe map T-SN Sturminster; 1808 OS drawing (Shaftesbury); Epoch 1 25" OS.

## 5. Results: Thames Tributaries

### 5.1. Overview

A total of 37 FPMs was recorded in the study area for the Thames tributaries, of which 16 were identified on the River Thames, 12 were identified along the River Cole and nine were identified on the River Windrush. The FPMs are summarised in Figure 25. As discussed, each parish may have further FPMs located on tributaries within each parish, but these were not recorded.

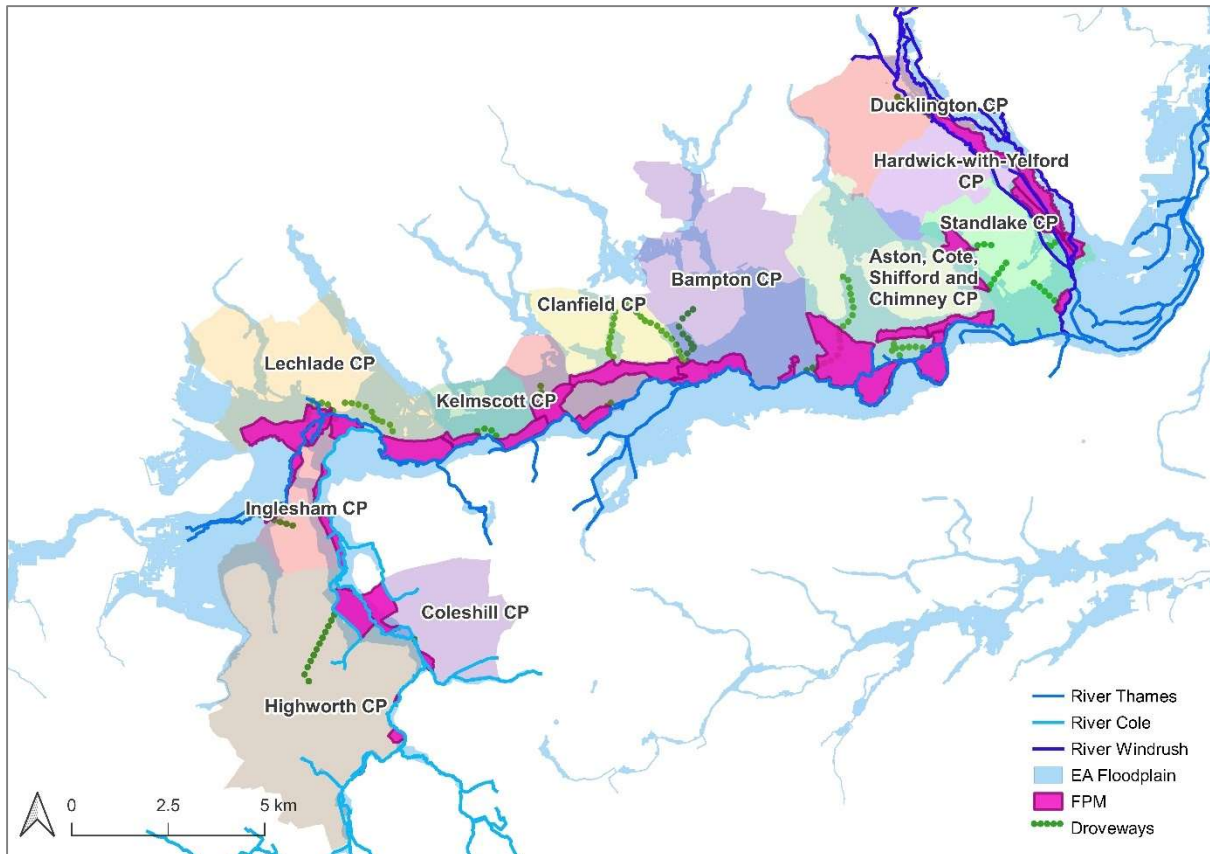


Figure 25 Distribution of FPMs along the route of the Thames, Coles and Windrush

Examination of the lidar in several areas shows drains and bedwork systems across some FPMs. This illustrates that the FPMs have been in use for centuries and that new management methods for these meadows were adopted to improve their productivity.

### FPM Droveways

The study of the Dorset Stour demonstrated how access to the FPMs forms a significant element to their identification. The drives that led from the settlements to the FPMs would have been critical to providing the access to the best areas of meadow. On the Thames, the droveways from the settlements are not as obvious on the maps as they were on the Dorset Stour and in some cases, what may have been former drives had already become roads by the time of the OS drawings and tithe maps. Settlements such as Radcott, Kelmscott and Chimney that are located adjacent to the meadows, have access that is directly from the settlement. FPM 11 at Chimney was accessed from a droveway that extends from the northern extent of the hamlet along a lane to a funnel-shaped entrance that opens onto the FPM. This droveway then continues across the FPM to Duxford and was mapped on the 1811 OS drawing for Bampton (Figure 26). A more familiar form of a droveway joining a funnel-shaped entrance could be seen at Standlake, where the droveway is shown on the tithe map and on the 1811 OS drawing for Bampton, to FPM 1. This droveway is now a footpath.



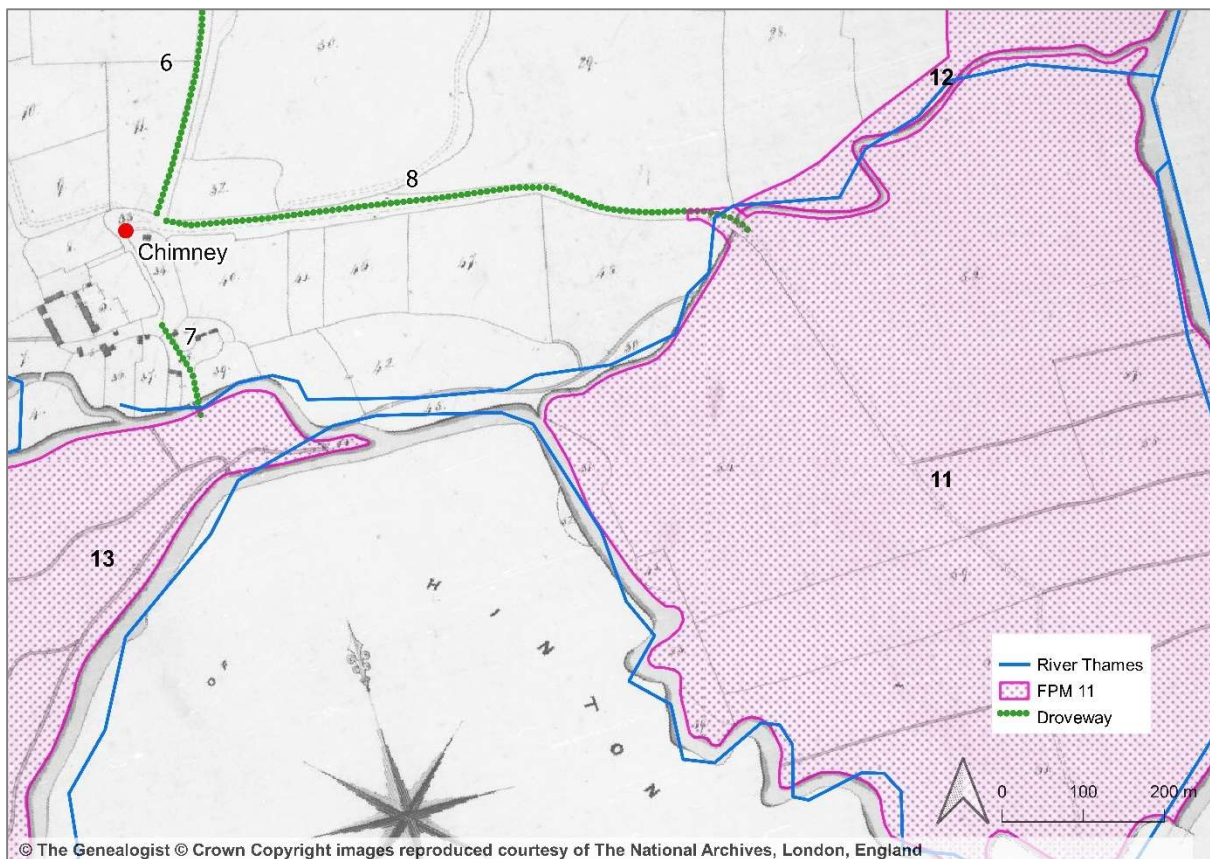


Figure 26 FPM 11 at Chimney showing the droveway and funnel-shaped entrance.

### Changes to the Floodplain: River Windrush

The floodplain on the River Windrush has dramatically changed since the medieval period and more since in the 20<sup>th</sup> century when much of the floodplain was subject to gravel extraction and subsequently turned into an area of fishing lakes. At Standlake, much of the floodplain has become trout fisheries and the FPMs identified on this river no longer survive. In the early to mid-19<sup>th</sup> century, the tithe map – Plan in the Parish of Standlake Oxon 1841 – shows that much of this area was still covered in open fields divided into furlongs. The combination of this and the way the Windrush divides into three branches, meant that the form of FPMs seen along the Dorset Stour were not so immediately visible on the Windrush. There were fewer droves leading to FPMs, access from the settlements appears to be via fords that cross into the FPMs, rather than from a droveway leading from the settlement which then joins the funnel-shaped entrance as was seen on the Stour. Standlake has extensive areas of doles marked within the floodplain recognisable as potential FPMs from their names (Lower and Upper Sydenham Mead). At Brighthampton, the FPM has no doles marked but *FPM 10 Stone Ham Hook, Half Penny Ham and Penny Ham* has the recognisable FPM form seen on the Dorset Stour – with a funnel-shaped entrance and droveway from the settlement. However, FPM was not located on the Windrush but has been included because it showed that this form is present, but that later enclosed field systems may have eliminated the original boundaries of the FPM in some places.

It is apparent that some parishes may have ‘shared’ floodplain meadows – evidence of this is present in the tithe records at Achim Mead which was in Northmoor parish (Figure 31). How long this FPM had been used by Northmoor parish is not known. The VCH has a reference to how in the 14<sup>th</sup> century, Standlake, Brighthampton, Hardwick and Shifford ‘intercommoned from lammas to martinmas’<sup>28</sup>.

<sup>28</sup> <https://www.british-history.ac.uk/vch/oxon/vol13/pp185-195>.



## 5.2. Ducklington Parish (Windrush)

Ducklington is located near the west bank of the River Windrush, and in Domesday it is recorded as having 33 households with 60 acres of meadow. The parish covers an area of 1954.5 acres, of which 242.7 (12.4% of the area of the parish) is within the modern floodplain. A total of 174.4 acres (8.9% of the total area of the parish) was identified as FPM. The Windrush is located on the north-east boundary of the parish, and at the time of the tithe the parish included the modern parish of Ducklington and Hardwick.

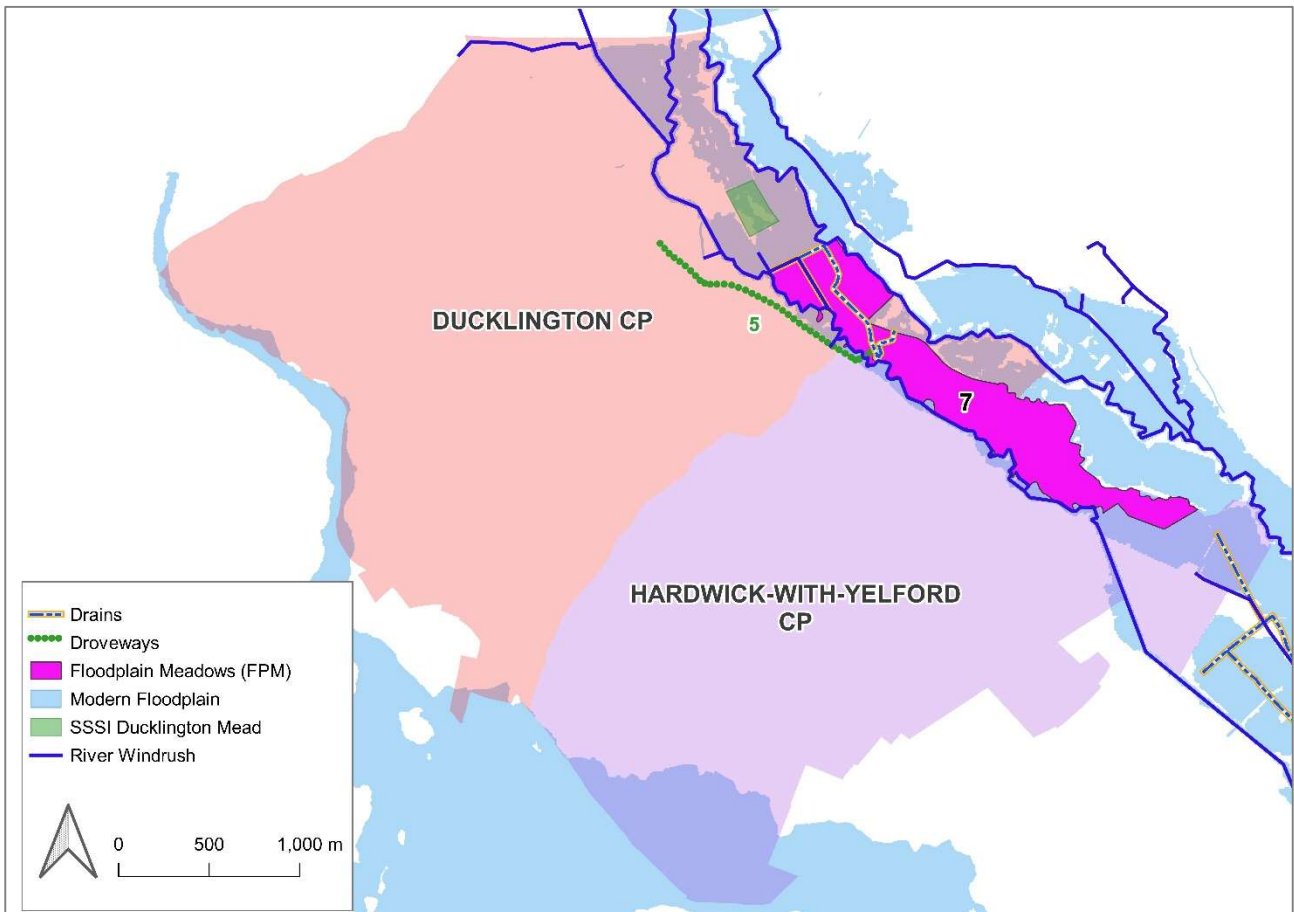


Figure 27 Domesday settlement at Ducklington showing the location of FPM 7. On the tithe map, the parish originally extended further down the River Windrush where FPM 7 is located within what is now Harwick-with Yelford parish.

### FPM 7 Allotments in Meadow and Great Meadow at Ducklington

FPM 7 is located between the two branches of the River Windrush. It consists of several plots, all named as Allotment in the Meadow or Great Meadow on the Ducklington tithe map for 1838. From the tithe map of Ducklington, none of these plots appears to be subdivided into doles but the fact they are named as allotments could be a recognition that they were originally divided into doles. There are drainage channels/ditches, and a pond are marked on the tithe which may indicate some form of irrigation system. The only access to this FPM that could be identified on the tithe map and from the Epoch 1 25" OS was from the Standlake Road (Figure 27).

The VCH for Ducklington<sup>29</sup> shows the area identified as FPM as Upper and Lower Mead, however it is not clear where this identification originates from. However, it covers the same area as that

<sup>29</sup> Figure 12 <https://www.british-history.ac.uk/vch/oxon/vol13/pp110-118>.

recorded from the tithe map and referred to as allotments. On the tithe map, the meadow abruptly ends at the border of Shilton Ham in Berkshire.

Although Ducklington Mead SSSI falls within the modern parish of Ducklington, historically the area within which the SSSI lies was within the parish of Curbridge, which lay beyond the study area of this project.

Source: Plan of the Parish of Ducklington in the County of Oxford 1838.

Extent: 174.37 acre, this FPM covers 71.85% of the floodplain.

Confidence Level: 4

### 5.3. Standlake Parish (Windrush)

The parish of Standlake covers an area of 2604.1 acres of which 1365 acres (16% of the parish) are located within the modern floodplain (Figure 28). A total of 413.04 (30% of the total area of the parish) was identified as FPM, and these meadows occupy 30% of the floodplain.

The fields within the parish were not enclosed until 1853 and this is reflected in the tithe map *Plan in the Parish of Standlake Oxon 1841*, which illustrates multiple furlongs in open fields across the parish. The furlong names for many of these open field systems indicate most were arable. There is an area of plots on the Standlake parish plan that were later allocated to the township of Hardwick, within the parish of Ducklington and which appear on the *Tithe for Hardwick in Ducklington Parish 1851*. These plots were located in the northern extent of Lower and Upper Sydenham Meads in an area recorded as Common and Up Meadow in the *Tithe for Hardwick in Ducklington Parish 1851*. As the tithe for Standlake parish predates the Hardwick parish tithe, these plots have been included as part of FPM 2. All these FPMs were referred to as Lammas meadows by the 19<sup>th</sup> century.

The FPMs identified in this parish using the tithe map reflect a similar area of common meadow as that illustrated in the VCH<sup>30</sup> for Standlake. The large area of common located in the floodplain to the south of Standlake, marked on the tithe map and the 1811 OS drawing for Bampton, are shown on the VCH illustration as common pasture, implying that it was not being used as floodplain meadow.

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<sup>30</sup> <https://www.british-history.ac.uk/vch/oxon/vol13/pp171-180>.

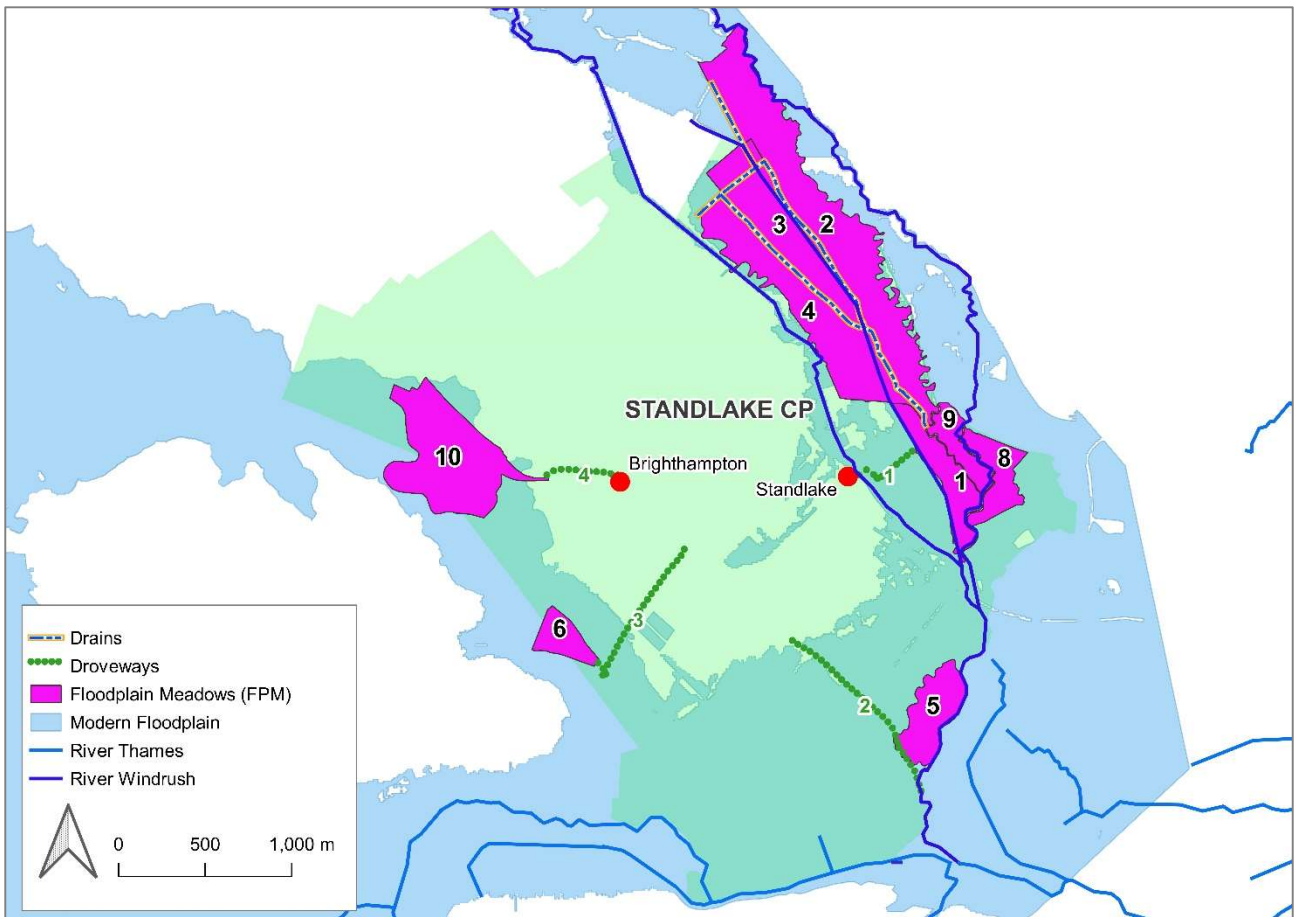


Figure 28 Location of FPMs identified at Standlake.

## Brighthampton

Originally the hamlet of Brighthampton was divided between Bampton and Standlake parishes before being merged with Standlake in the early 20<sup>th</sup> century. It is located centrally within the parish of Standlake, with the Windrush to the east and the Thames to the south. Standlake is located almost adjacent to Brighthampton to the east: the two settlements are joined by the same road and the open fields surrounded them were shared. Brighthampton was the only settlement in the parish of Standlake that was recorded in Domesday. It had 42 households and 106 acres of meadow.

### FPM 10 Stone Ham Hook, Half Penny Ham, Penny Ham and Yelford Mead, Brighthampton

FPM 10 has a funnel-shaped entrance on to a possible common area. Three plots were marked 'ham' on the tithe map and are bordered by a tributary that forms part of the boundary of the parish of Standlake with Aston, Cote, Shifford and Chimney parish. This tributary has been modified and is now known as Brighthampton Cut. The area adjoining these plots does not have any name and is shown as a greyed-out area on the tithe map, suggesting that this area and the hams could have been floodplain meadow managed as commons.

A droveway from Brighthampton is mapped on the 1839 tithe map for Standlake (Figure 28, Droveway 4). By the time Brighthampton has been mapped on the 1851 tithe map for the Township of Brighthampton, this trackway has gone.

Associated monuments: SM LEN [1006342](#) Complex of rectangular enclosures, ring ditches and tracks.

Extent: 85.04 acres; this FPM covers 6.23% of the floodplain.

Source: Plan in the Parish of Standlake Oxon 1841.

## Standlake

There is no record for Standlake as a settlement in Domesday and its medieval history is complex. It became recognised as a settlement in the mid-12<sup>th</sup> century, but it is likely Brighthampton, recorded in Domesday, included a manor at what is now known as Standlake.

In the west of the parish of Standlake, the River Windrush flows as two separate tributaries, between which are located six meads that could be identified from the 1859 tithe map for Standlake. The meads mapped on the tithe include Ox Lease (FPM 1), Lower and Upper Sydenham Mead (FPM 2), Middle Dole (FPM 3), Ealing Furlong (FPM 4), Outer Hams (FPM 8) and Middle Hams (FPM 9). These might all be regarded as all part of a single FPM, but in the early stages of the project they were recorded separately as it was not clear how best to address them. They share a common droveway (Figure 28, Droveway 1) but are separated by the two branches of the Windrush.

Between Ealing Furlong and Middle Dole, and Middle Dole and Lower and Upper Sydenham Meads is a drain recorded on the tithe as 2277 – Ditches in the Mead. By the time of the tithe, these ditches appear as uniform and regular with a possible hatch marked on the tithe map to control the flow at the northern extent (Figure 29). The earlier 1811 OS drawing for Bampton shows a meandering stream between the meads, other than at the northern end which has been modified by straightening.



Figure 29 Ealong Furlong showing ditch with possible hatch (within purple box) marked on the 1859 tithe map for Standlake.

These meads with their multiple doles suggest they may have formed an earlier meadow managed as a common; accessed via a track marked on the tithe as plot 2276 Farm Close Lane. This lane fords the River Windrush from the Church at Standlake and opens onto Ox Leys (Droveway 1).

The entry in the tithe apportionment record for plot 2245 in Upper Sydenham Mead refers to this plot being located within Southleigh parish, and it acknowledges that Standlake Commoners have the feed at Lammas (Figure 30).

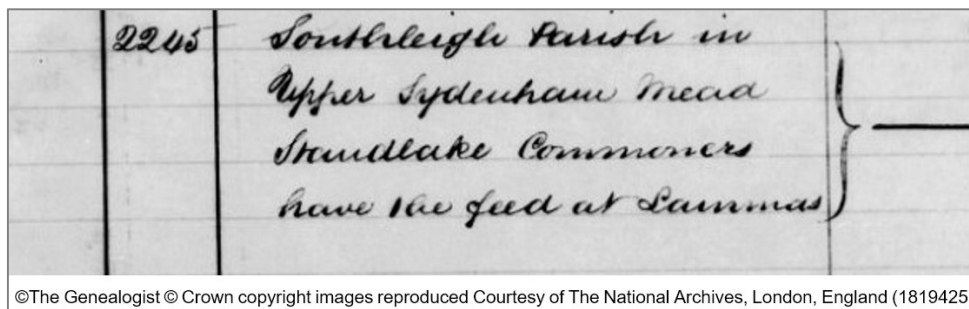


Figure 30 Tithe Apportionment entry for plot 2245 situated in Upper Sydenham Mead noting the Standlake Commoners right to feed at Lammas in Upper Sydenham Mead.

There are several plots to the south of these meads that did not have doles but have place names that may suggest their previous usage. They include:

- two plots named Church Close (both pasture) may suggest this was former church land, that was then enclosed (hence Close name).
- Heyfords Close (pasture) is possibly part of the former floodplain meadow (although a FPM polygon has not been created for this). No doles are visible on the tithe map.
- Milking Place (pasture) and Milking Place part of Ealing Furlong (pasture).
- Three plots named Camdens Plot (all pasture).
- Hill Close (pasture).

The FPMs are summarised individually as follows:

#### **FPM 1 Ox Lease, Standlake, Standlake**

Potential FPM at the end of Farm Close Lane, which is accessed via a very slight funnel-shaped entrance. The FPM is bordered by a branch of the Windrush on its eastern extent. Tithe does not record doles within this FPM, but field boundaries suggest there were doles here previously.

Associated monuments: SM LEN [1006343](#) Prehistoric and Late settlements near Northmoor.

Source: Plan in the Parish of Standlake Oxon 1841.

Confidence level: 3

Extent: 30.81 acres; this FPM covers 2.26% of the floodplain.

#### **FPM 2 Lower and Upper Sydenham Mead, Standlake**

In FPM 2, multiple doles – most of which have their cultivation type recorded as pasture – are mapped on the tithe. Although this area is mainly pasture at the time of tithe, the mead name suggests this is part of a larger meadow. By the 19<sup>th</sup> century this meadow was referred to as a Lammas meadow.

Associated monuments: SM LEN [1006359](#) The Devil's Quoits.

Source: Plan in the Parish of Standlake Oxon 1841.

Extent: 142.12 acres; this FPM covers 10.41% of the floodplain.

Confidence level: 3



### **FPM 3 Middle Dole, Standlake**

FPM 3 is located between Lower and Upper Sydenham Mead and was covered in multiple doles on the tithe map. It is bounded by one of the branches of the Windrush. By the 19<sup>th</sup> century this meadow was referred to as a Lammas meadow.

Associated monuments: SM LEN [1006359](#) The Devil's Quoits.

Source: Plan in the Parish of Standlake Oxon 1841.

Extent: 64.9 acres; this FPM covers 4.75% of the floodplain.

Confidence level: 3

### **FPM 4 Ealong Furlong, Standlake**

Tentatively identified as an FPM due to its location next to FPMs 1-3, the location of FPM 4 may suggest it originally formed part of a floodplain meadow with these other areas. There are doles covering this area on the tithe map. By the 19<sup>th</sup> century this meadow was referred to as a Lammas meadow.

Associated monuments: SM LEN 1006359 The Devil's Quoits.

Source: Plan in the Parish of Standlake Oxon 1841.

Extent: 86.08 acres; this FPM covers 6.31% of the floodplain.

Confidence level: 2

### **FPM 8 Outer Hams, Standlake**

Marked on the tithe map as Outer Hams and covered by multiple doles. Tithe cultivation type indicates all the plots were under pasture at the time of the apportionments. Possibly part of an earlier former floodplain meadow.

Associated monuments: SM LEN [1006343](#) Prehistoric and Late settlements near Northmoor.

Source: Plan in the Parish of Standlake Oxon 1841.

Extent: 23.91 acres; this FPM covers 1.75% of the floodplain.

Confidence level: 4

### **FPM 9 Middle Hams, Standlake**

This area is marked on the tithe map as Middle Hams and divided into small plots, each under pasture. It may be part of an earlier former floodplain meadow. There are remnants of doles shown on the tithe map.

Associated monuments: SM LEN [1006343](#) Prehistoric and Late settlements near Northmoor.

Source: Plan in the Parish of Standlake Oxon 1841.

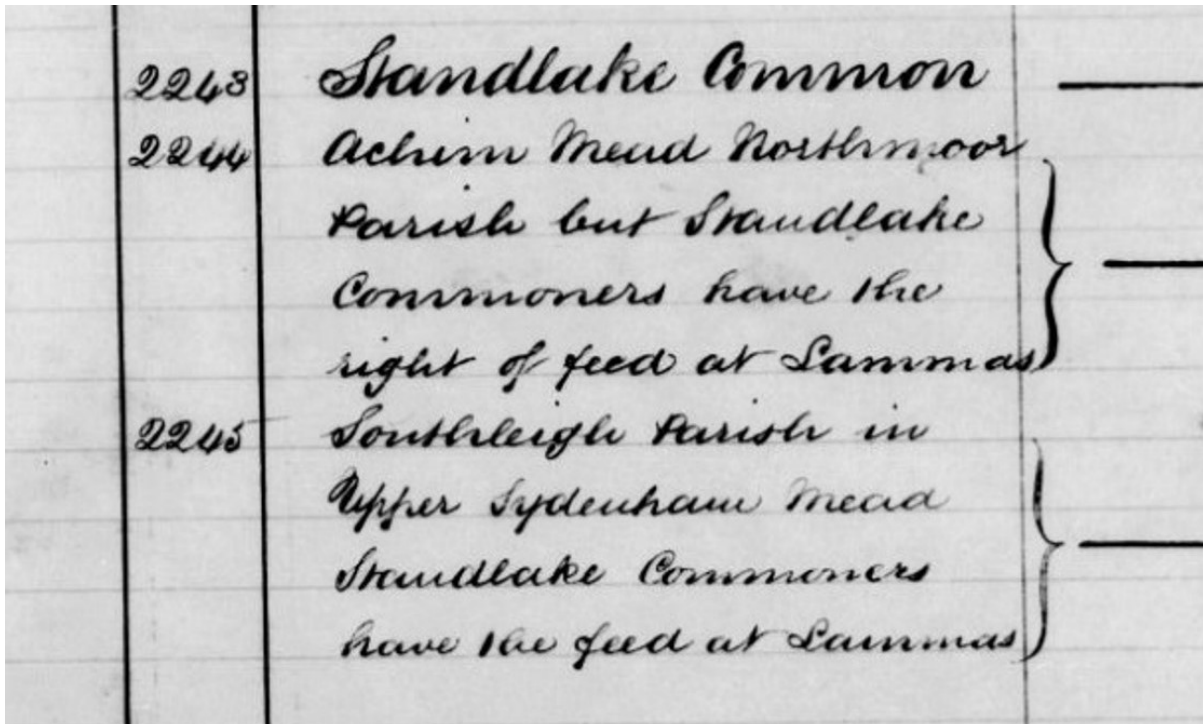
Extent: 16.6 acres; this FPM covers 1.22% of the floodplain.

Confidence level: 4

### **FPM 5 Achim Mead Lammas, Standlake**

Achim Mead is located on the south-east boundary of Standlake Common. This mead differs to the others identified within the parish as it is bounded on all sides by water, with the River Windrush to

the west and a small meandering stream that leaves the Windrush at Newbridge Mill and then re-joins the river at the northeast end of the mead. There is no evidence of a crossing point, but the stream may have been fordable. The 1811 OS drawing for Bampton shows a droveway or trackway (now Abingdon Road) leaving Brighthampton via a wide, possible funnel-shaped entrance onto Standlake Common (Figure 28, Droveway 2). It traverses the common to Newbridge Mill, passing alongside Achim Mill – where the droveway appears to merge with the stream that borders the west extent of the mead. There are no doles recorded on the tithe for this mead and the tithe entry records this whole area as a single plot which is within the Northmoor parish, but for which the Standlake Commoners have the right of feed at Lammas (Figure 31).



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Figure 31 Tithe apportionment entry for Achim Mead plot 244

Associated monuments: SM LEN [1006343](#) Prehistoric and Late settlements near Northmoor.

Source: Plan in the Parish of Standlake Oxon 1841

Extent: 32.89 acres; this FPM covers 2.41% of the floodplain.

Confidence level: 4

#### **FPM 6 Adsworth and South Mead, Standlake**

This area of doles, located on the eastern boundary of the parish, is marked as Adsworth and South Mead. Within the area that is marked as Adsworth, the doles are wide and their cultivation type is recorded in the tithe apportionment as arable; but in South Mead, which is covered with narrow doles, the cultivation of most of the doles is recorded as pasture. South Mead is accessed by a lane that comes off the road between Brighthampton and Standlake called Fowlers Way (tithe plot 2257). The lane runs between the blocks of furlongs that surround the settlements of Brighthampton and Standlake (Figure 28, Droveway 3). This mead is bordered by a tributary running along its western edge, which also forms the boundary between the parish of Standlake and the parish of Aston, Cote, Shifford and Chimney.

#### 5.4. Aston, Cote, Shifford and Chimney Parish (Thames)

Aston, Cote, Shifford and Chimney covers an area of 4442.18 acres, of which 2565.2 acres (57.7% of the area of the parish) is just outside of the modern floodplain while the rest is within it. A total of 560.43 acres (13% of the total area of the parish) was identified as FPM. There are three settlements located within the parish: Aston and Cote; Shifford; and Chimney.

##### Shifford

Shifford is located between Standlake and Chimney just outside the modern floodplain. It is recorded in Domesdays as a settlement of 13 households and had 50 acres of meadow. The early medieval settlement is associated with a ford that crossed the Thames.

The areas identified as FPM using the *Map of the Hamlet of Shifford in the Parish of Bampton in the county of Oxford in 1847* and tithe apportionment records reflects the 1849 map shown on the VCH<sup>31</sup> that records areas of meadow and commons adjacent to the Thames. The 1849 map also shows areas of grass with meadow names extending up the unnamed tributary that flows to the east of Shifford from Yelford. However, this tributary – which was significantly straightened by the time of the Epoch 1 25" OS and the adjacent land presumably drained – has not been examined as part of this study.

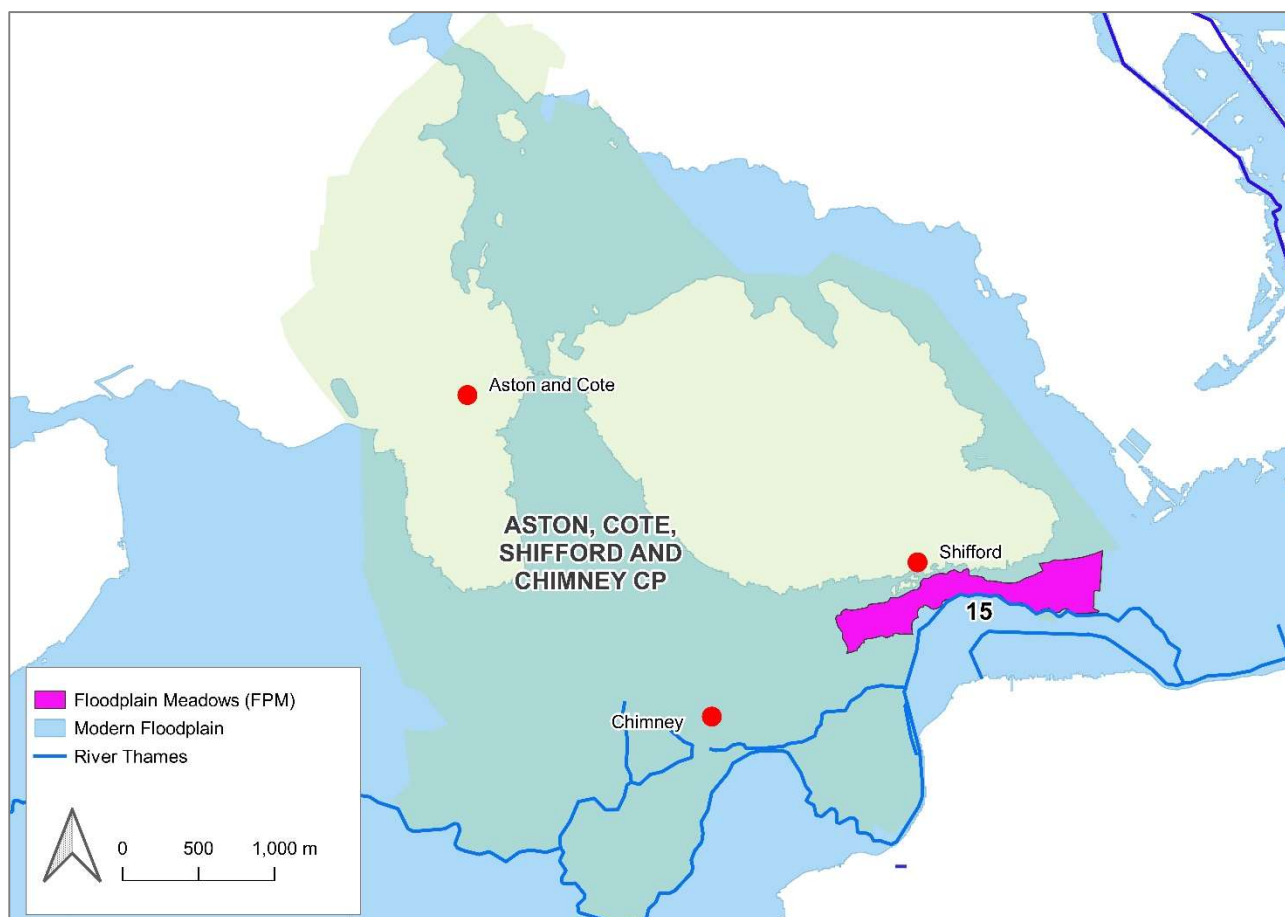


Figure 32 Location of FPMs identified at Shifford in the parish of Aston and Cote.

##### FPM 15 Common Meadows at Shifford

There are six tithe plots located next to the south of Old Shifford Farm which are divided by interconnecting brooks with fords for access to each area. There is no indication of doles on any of

<sup>31</sup> <https://www.british-history.ac.uk/vch/oxon/vol13/pp99-102>.

the plots on the tithe but the tithe names, Upper Common, Middle Common, Horse Common and New Meadow, all imply that this area was former meadows managed as commons prior to becoming enclosed fields. There is no indication of any driveway to the meadows, but if the settlement was in the area of the chapel/Old Shifford farm, it would have been adjacent to the meadows that were bordered by brooks.

Associated monuments: SM LEN [1020356](#) Round barrow cemetery 290 east of old Shifford Farm.

Source: Map of the Hamlet of Shifford in the Parish of Bampton in the county of Oxford 1847.

Extent: 94.96 acres; this FPM covers 3.7% of the floodplain.

Confidence Level: 2

## **Chimney**

The small hamlet of Chimney lies in the southern area of the parish of Aston, Cote, Shifford and Chimney (Figure 33). The hamlet is situated centrally on a slightly raised area of ground in the floodplain of the Thames and it is surrounded by a complex system of meadows with drainage channels that connect it to the Thames. There has been known settlement here since the early medieval period<sup>32</sup> and excavations revealed a large mid-10<sup>th</sup> century burial ground west of Chimney Farm. The medieval settlement at Chimney was not recorded in Domesday, but there is the possibility that its tenants were listed under the Bampton Deanery manor. Chimney is located within the hundred of Bampton. The 15<sup>th</sup> century saw a decrease in population, resulting in the settlement dwindling to the hamlet known today.

As well as the FPMs identified, there were other plots on the tithe where their state of cultivation was recorded as meadow. However, these plots are not thought to represent former medieval floodplain meadows as they do not have droves leading to them. However, four of these meadows have ham names.

All the floodplain meadows have drainage channels and back drains across them.

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<sup>32</sup> <https://www.british-history.ac.uk/vch/oxon/vol13/pp80-82#fnn24>.

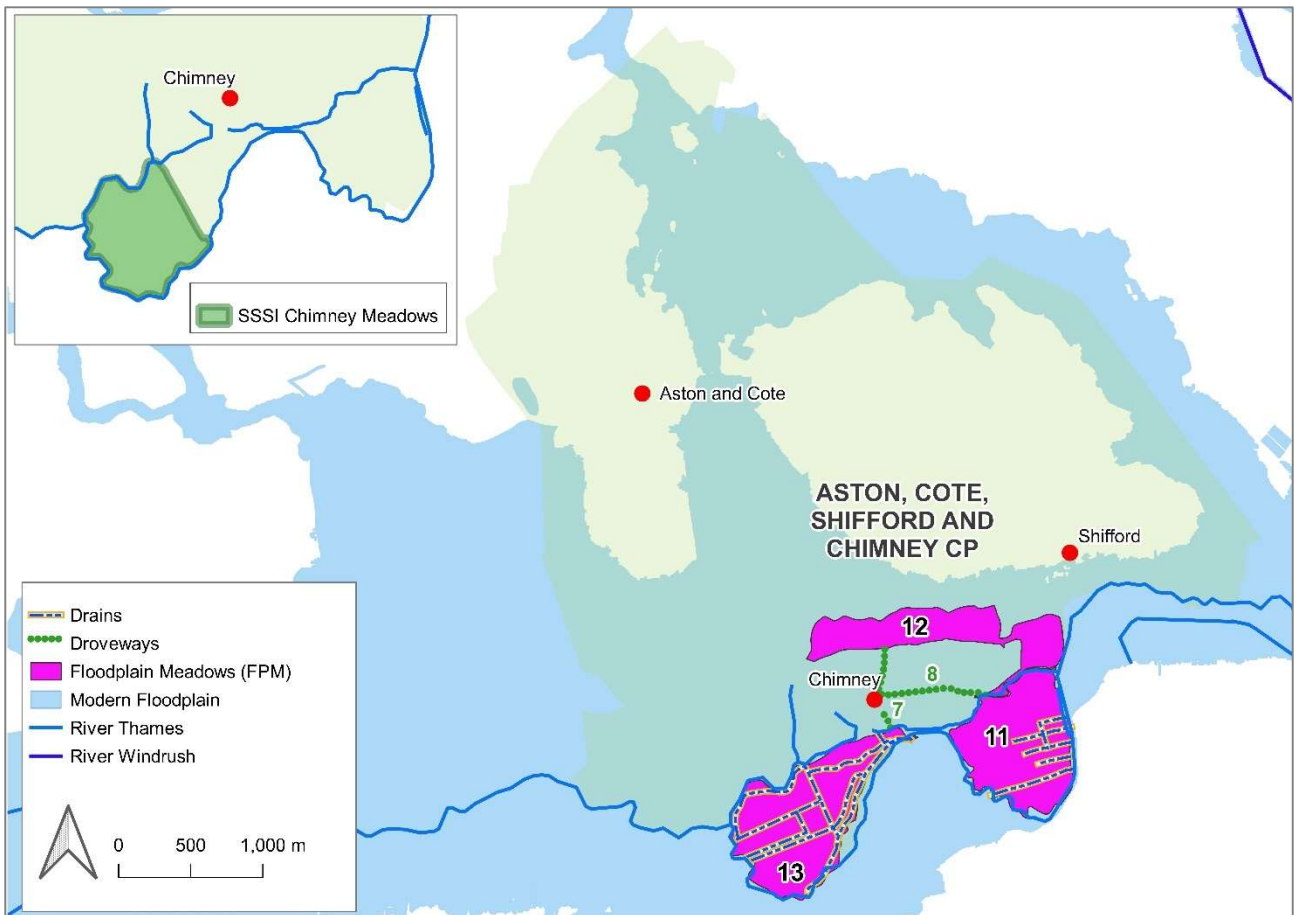


Figure 33 Location of FPMs identified at Chimney, in the parish of Aston and Cote.

#### **FPM 11 In the south east of Chimney Hamlet**

FPM 11 consists of several large plots, all with names that either end in Hay or Ham; but no doles are shown on the tithe map. The FPM has a simple network of drains mapped on the *Plan of the Hamlet of Chimney* dated 1846. At its northern boundary, Droveaway 8 joins the FPM (Figure 33, Droveaway 8). This droveaway extends from the hamlet at Chimney across towards FPM11 where it merges with Plot 55, which acts as a funnel to a bridge/ford to cross into the FPM. At the southern end of the FPM is the Duxford Ferry and Ford, to re-join the road to Duxford.

Associated monuments: SM LEN [1018656](#) Causewayed enclosure 900m west of Chimney Farm; 1006341 Ring Ditches.

Source: Plan of the Hamlet of Chimney in the Parish of Bampton Oxfordshire 1846.

Extent: 141.19 acres; this FPM covers 5.5% of the floodplain.

Confidence level: 5

#### **FPM 12 Moor in the North of Chimney Hamlet**

This FPM is located to the north of Chimney and is made up of six large plots, each with the name 'Moor'. There is no evidence of any doles within these plots. Every plot on the tithe is recorded as being cultivated as meadow. The FPM is accessed via a droveaway extending from Chimney to Plot 18 (Stumps Moor) and Plot 19 (Little Moor).

Associated monuments SM LEN [1018656](#) Causewayed enclosure 900m west of Chimney Farm, 1006341 Ring Ditches.



Source: Plan of the Hamlet of Chimney in the Parish of Bampton Oxfordshire 1846.

Extent: 104.29 acres; this FPM covers 4.07% of the floodplain.

Confidence level: 4

### **FPM 13 Meads in south west of Chimney Hamlet, Bampton**

FPM 13 is in the south-west corner of the hamlet of Chimney and is made up of seven plots. As with the other FPM in this area, there are no doles mapped on the tithe. Access to the FPM is across the Thames via a ford/bridge in the north-east corner (Figure 33, Droveaway 7). The VCH<sup>33</sup> records plot 64 on the tithe as Showels Mead and that in the 13<sup>th</sup> century this mead was called 'Sewalesweare' and was an area of common pasture.

A large proportion of FPM 13 is covered by Chimney Meadows SSSI (see inset, Figure 33).

Associated monuments: SM LEN [1018656](#) Causewayed enclosure 900m west of Chimney Farm; 1006341 Ring Ditches.

Source: Plan of the Hamlet of Chimney in the Parish of Bampton Oxfordshire 1846.

Extent: 168.46 acres; this FPM covers 6.57% of the floodplain.

Confidence level: 5

### **Aston and Cote**

Neither Aston nor Cote were recorded in Domesday, but both were known settlements in the early medieval period. The VCH<sup>34</sup> for Aston and Cote suggests a figure of 55 households in Aston with at least 15 at Cote around the time of Domesday and that the population of these settlements together formed the largest in the Hundred of Bampton. The VCH also shows a plan of Aston and Cote c.1770 which indicates the same area of common meadow as identified by this project from the 1840 tithe plan for the area. There is a large common located between the two settlements, but as this is just listed as common it was probably being used for grazing animals, whereas the identified FPM has been expressly recorded on the tithe as an area of common meadow.

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<sup>33</sup> <https://www.british-history.ac.uk/vch/oxon/vol13/pp82-85>.

<sup>34</sup> <https://www.british-history.ac.uk/vch/oxon/vol13/pp62-66>.

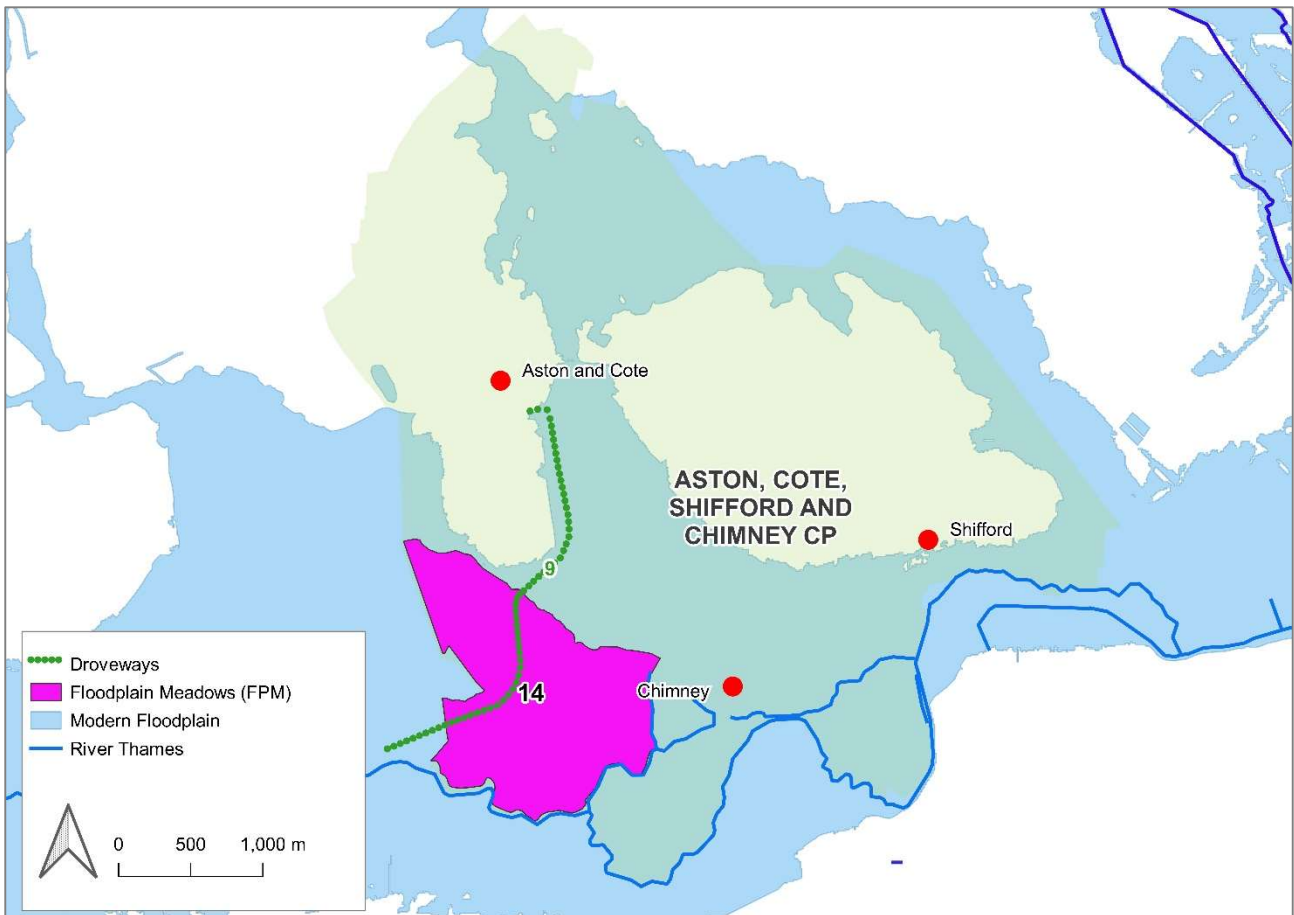


Figure 34 Location of FPMs identified at Aston, in the parish of Aston and Cote

#### FPM 14 FPM at Aston and Cote

FPM 14 at Aston and Cote is located in the south-east area of the settlement of Aston. It is made up of two meads but has been recorded as a single FPM. The whole area is divided by the Great Brook which was probably accessible from a droveway across the common at Aston.

Using the tithe map and comparing the results with the annotated map recorded on the VCH, two distinctive areas – Out Mead and In Mead were identified.

The *Plan of the Hamlet of Aston and Cote in the Parish of Bampton 1840* has some interesting, annotated information that indicates how the meadow was being managed during the early 19<sup>th</sup> century. There are references to Grass Stewards in the apportionment records, who are listed as the landowners for the common meadow. Many of the plots within the floodplain have their cultivation types listed as ‘common meadow’, which has not been observed on other tithe maps before, either on the Thames or on the Dorset Stour. In addition to this, some plots have names that signal their use as meadows: 3191 Last Laying Out; 3197 In Mead First Days Mowth; 3238 Home Laying Out; and 3199 Second Days Mowth. Although most of the plots are large, irregular shapes they clearly were part of a system managed as commons. It also seems that the large plots recorded on the tithe map were previously divided into allocated strips or doles, as indicated by plot names such as plot 3198 Dolehams; 3245 Dole Hams; and 3188 Dolehams.

Out Mead covers the area north of the tributary Great Brook, which at the time of the tithe, meanders across the landscape but has subsequently been straightened. The tithe apportionment lists Bampton Furlong (plot 3185), Last Laying Out (plot 3191), Haywards Ham (plot 3192), Trenchers (plot 3193), Grass Stewards (plot 3194), Shippery (plot 3196), Quackmans (plot 3107), Dolemans (plot 3188), Grass Stewarts (plot 3190) and Glacks Ham (plot 3190) within this mead. The landowners of these plots are recorded in the tithe apportionment as The Grass Stewards

(Figure 35) and their role in managing the common meadow and common pasture was outlined by the Rev. J. A. Giles (1848)<sup>35</sup>. He describes the Stewards as a group of four influential men who have rights to the commons and who are responsible for the allocation of the lots just prior to the cutting of the grass for hay.

Grass Stewards The	Themselves	2185	To mans plat	Meadow
		2186	Quemans ham	"
		3169	Mays do	"
		3170	Strudlands do	"
		3190	Grass Stewards do	"
		3192	Haywards do	"
		3193	Trunchers do	"
		3194	Grass Stewards do	"
		3200	Bussinger do	"
		3203	"	"
		3222	Ham in Bussinger corner	"
				Gravel for

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Figure 35 Extract from Tithe apportionment records from Aston and Cote.

In Mead is the common meadow that lies to the south of the Great Brook. Plot names related to activities associated with the process of haymaking include In Mead First Days Growth (plot 3197), Grass Stewards Ham (plot 3241), Meadow (plot 3248), Dole Ham (plot 3245), Part of Thames Furlong (plot 3234), Home Laying Out (plot 3239) and Second Days Mowth (plot 3199) (Figure 36). There is also a large area called Bussengers Ham, in the south-east of this mead that is covered in multiple plots organised in strips: but the form is not quite the same as the doles or furlongs visible elsewhere. These plots could represent the remnants of an earlier area of doles. The Rev. J. A. Giles (1848) describes ‘the common meadow is laid out by boundary stones into 13 large divisions, technically called “layings out”’ and it is assumed that this is where the plot name of ‘Last Laying Out’ derives. The name of Dolemans may reflect the allocation of doles to its tenants in this area.

<sup>35</sup> Rev J. A. Giles D.C. L., 1848, History of the Parish and town of Bampton with the district and hamlets belonging to it, published at the author’s private press. Page 79 and available online at: [https://www.google.co.uk/books/edition/History\\_of\\_the\\_Parish\\_and\\_Town\\_of\\_Bampto/h2AJAAAIAAJ?hl=en&gbpv=1&dq=brighthampton+history&pg=PA87&printsec=frontcover](https://www.google.co.uk/books/edition/History_of_the_Parish_and_Town_of_Bampto/h2AJAAAIAAJ?hl=en&gbpv=1&dq=brighthampton+history&pg=PA87&printsec=frontcover).

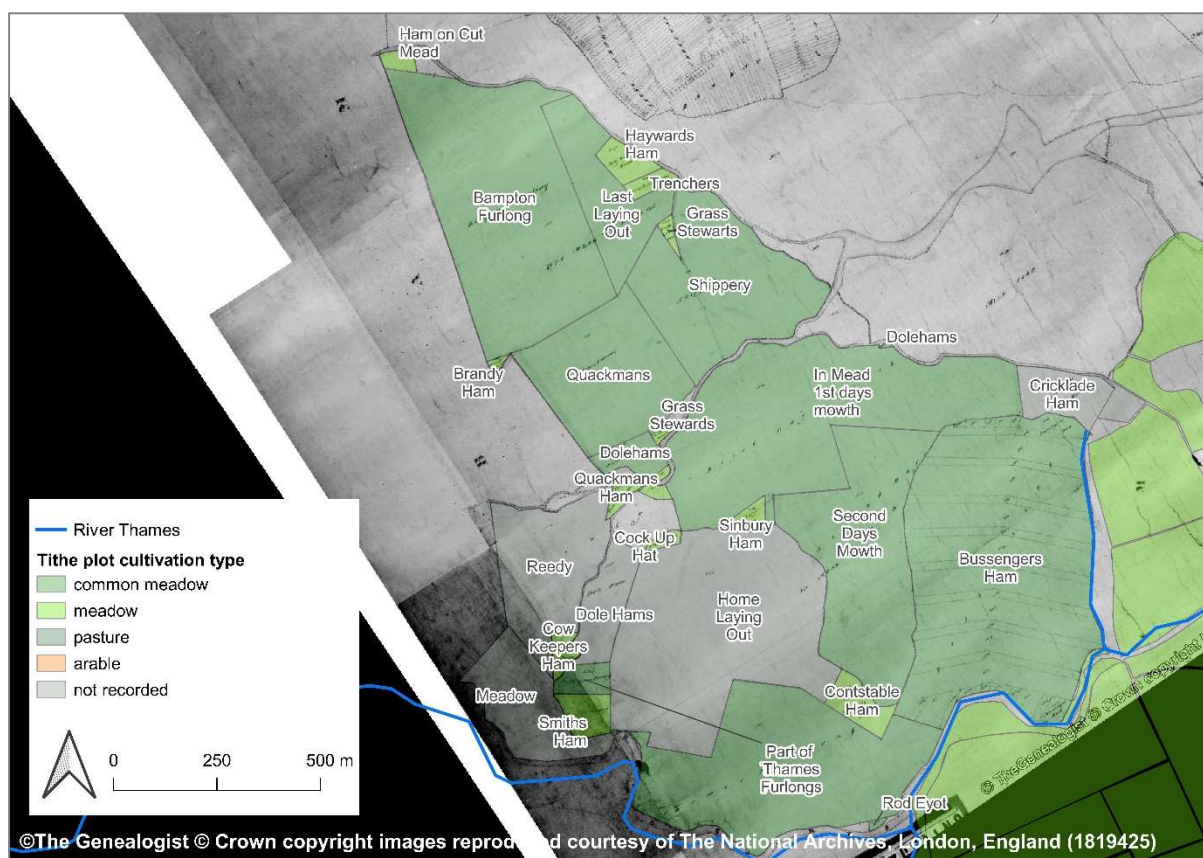


Figure 36 FPM 14 at Aston, with plot names pertaining to the hay making process.

Access to FPM 14 from the settlement at Aston is believed to be via a trackway from Aston that crosses Aston Common, as shown on the 1811 OS drawing for Bampton (Figure 34, Droveway 9). A series of droves is visible on this survey and it also shows a droveway from Cote to Aston, which would have enabled access from Cote. The droveway enters the meads via a crossing point (possibly a green bridge) into Slippery (plot 3196). The droveway continues across the mead, crossing the Great Brook into Mead First Days Mowth (plot 3197). It is not clear from the tithe whether this is via a ford or a bridge due to damage to the original map. The 1811 OS drawing for Bampton is no clearer and shows the droveway crossing straight over the brook. The droveway crosses the entire length of In Mead eventually joining the Buckland Road. This droveway is no longer in existence on any modern mapping, so was clearly not substantial enough to become a permanent roadway in the 19<sup>th</sup> century. The 1880 OS 25" 1st edition map also illustrates a lane called Ham Lane, leading from Aston to plot 3196. However, this is probably a 19<sup>th</sup> century route to the meads and is now shown as a trackway on modern maps.

Associated monuments: SM LEN 1018656 Causewayed enclosure 900m west of Chimney Farm, 1006341 Ring Ditches.

Source: A Plan of the Hamlet of Aston and Cote in the Parish of Bampton 1840.

Extent: 465.47 acres; this FPM covers 18.5% of the floodplain.

Confidence level: 5

## 5.5. Bampton Parish (Thames)

The parish of Bampton covers an area of 4524.5 acres of which 1865.7 acres (41.2% of the parish) are located within the modern floodplain (Figure 37). A total of 216.3 acres (5% of the total area of the parish) was identified as FPM.



The only tithe map available for the parish of Bampton is a map titled *Map of the Titheable Lands in the Township of Bampton*, but this only records a tiny proportion of the southern part of the parish of Bampton. The VCH records how the southernmost part of the parish had ‘rich meadow and pasture’<sup>36</sup> due to the geology of this area being alluvium. However, the extents of any floodplain meadow are not clear from either the Epoch 1 25” OS or the 1811 OS drawing for Bampton. Richard Davis’s 1793/1794<sup>37</sup> map of Bampton Hundred shows this area as a continuous strip but this does not clarify whether it was common meadow. Although the small amount of tithe information available suggests the presence of an FPM by the Thames, it is not possible to work out its full extent.

## Bampton

The settlement at Bampton is situated just outside of the modern floodplain, which wraps around the settlement from the south-west to the north-east extents. Bampton had 89 households recorded in Domesday, and 44 acres of meadow.

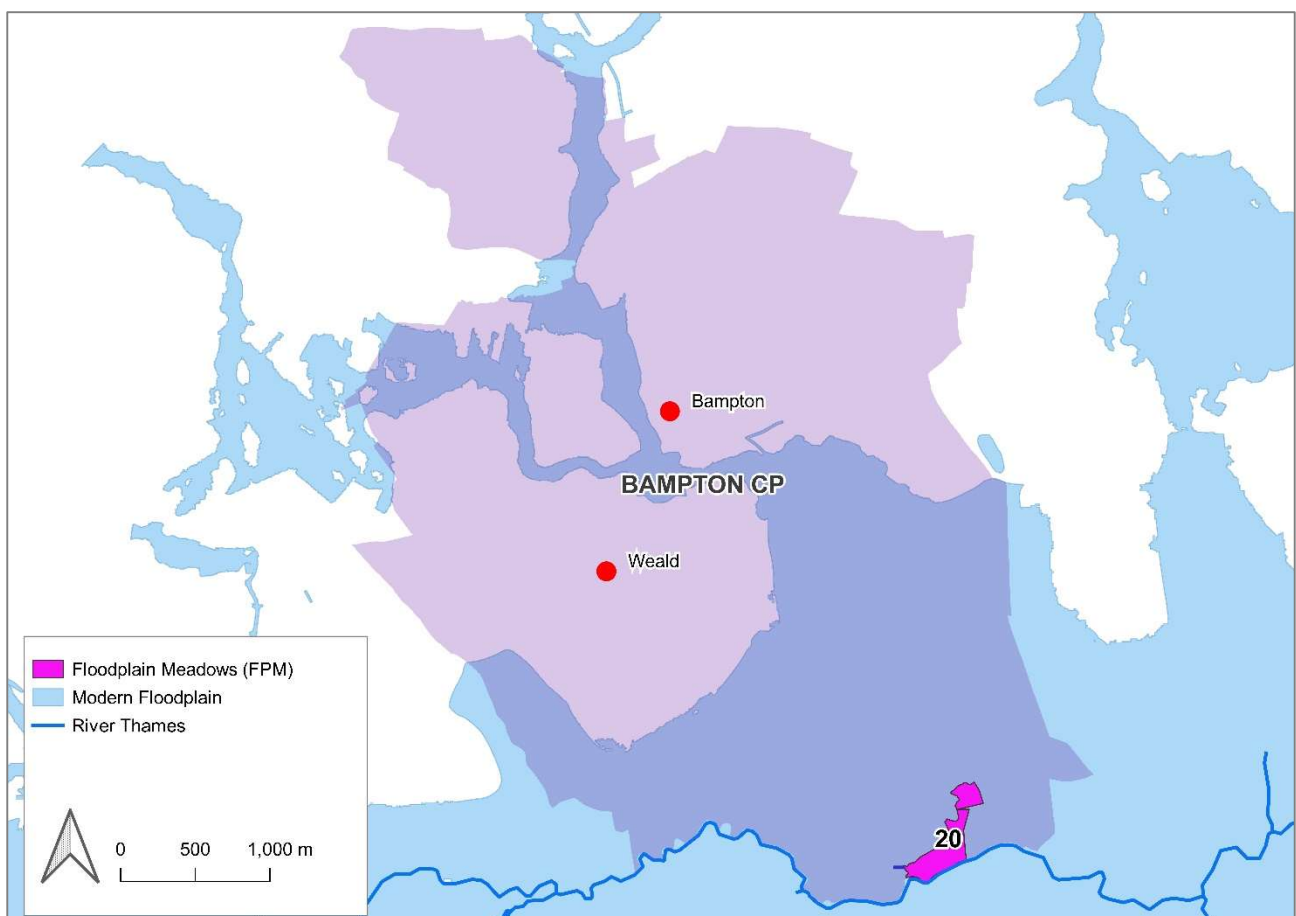


Figure 37 Location of FPMs identified in the parish of Bampton.

### FPM 20 Bampton Mead

As previously noted, no tithe map for Bampton was available other than for a small area adjacent to the Thames. This map only shows three numbered plots – plot 135 Allotment in Bampton Mead and plot 136 and 137 Queenborough Meadow. The reference to ‘allotment’ and ‘mead’ suggests

<sup>36</sup> <https://www.british-history.ac.uk/vch/oxon/vol13/pp6-8#anchorn26>.

<sup>37</sup> A new map of the County of Oxford: sheet number IX (uncoloured)  
[https://pictureoxon.com/frontend.php?keywords=Ref\\_No\\_increment;EQUALS;POX0250983&pos=10&action=zoom&id=1338323](https://pictureoxon.com/frontend.php?keywords=Ref_No_increment;EQUALS;POX0250983&pos=10&action=zoom&id=1338323).



these plots were once part of a larger common meadow whose true extents cannot be known given the evidence available. Situated just to the north of the plots on the Buckland Road is a farm named Meadow Farm, and just beyond that is Meadow Arch Bridge, both mapped on the Epoch 1 25" OS. Buckland Road runs next to Plot 135, but there is no funnel-shaped entrance to the area that has tentatively been identified as an FPM here.

Associated monuments: SM LEN [1018656](#) Causewayed enclosure 900m west of Chimney Farm; 1006341 Ring Ditches.

Source: A Plan of the Hamlet of Aston and Cote in the Parish of Bampton 1840.

Extent: 26.23 acres; this FPM covers 1% of the floodplain.

Confidence level: 4

## **Weald**

The settlement of Weald is located out of the floodplain, immediately south of Bampton, in the Hundred of Bampton. It had ten households and 24 acres of meadow recorded in Domesday. The *Map of District comprising Burroway Meadow, Charney otherwise Sharney Meadow, Norton Meadow, and certain the lands lying with the parish of Black Bourton in the County of Oxford 1844* shows meadows lying adjacent to the Thames, to the south of Weald, from where there is a trackway which extends down to the meadows. The meadow area is problematic as part of the FPM identified lies within the adjoining parish of Clanfield; and on the Oxford Tithe Coverage Map, this area is mapped separately as Burroway Meadow, which included an area of meadow that was tied to Black Bourton Parish. A reference in the VCH notes that those who lived in Wealds (and probably Bampton) may have used this meadow<sup>38</sup> while those who lived in Black Bourton would have used Bourton Meadow.

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<sup>38</sup> <https://www.british-history.ac.uk/vch/oxon/vol13/pp31-43#anchorn8>.

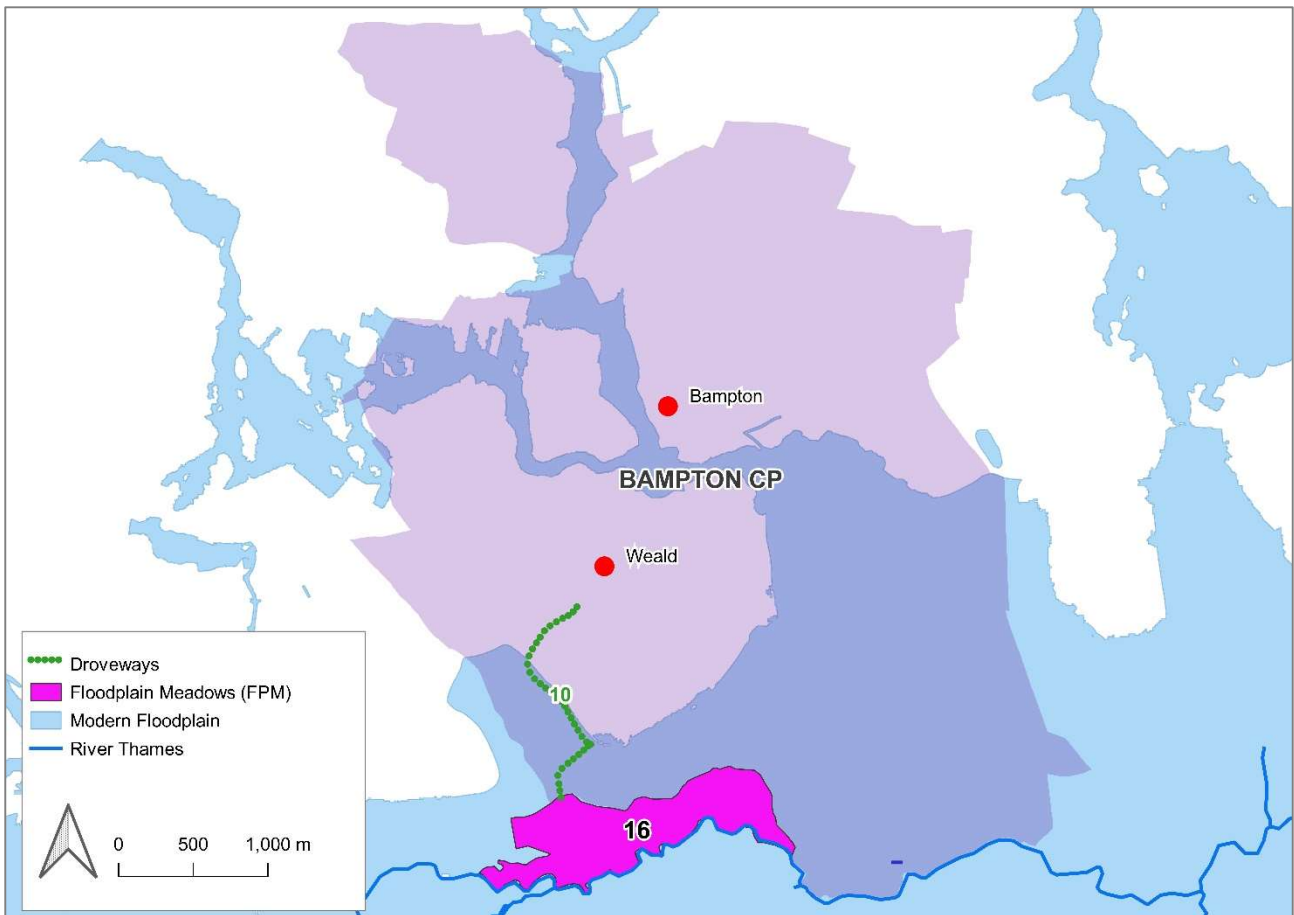


Figure 38 Location of FPM identified at Weald, in the parish of Bampton.

### **FPM 16 Burroway, Sharney, Norton and Bourton Meadows south of Weald**

This area is made up of four meadows that have been divided between separate settlements at differing points in the 18<sup>th</sup> and 19<sup>th</sup> century before finally all being incorporated into Clanfield parish in the later 19<sup>th</sup> century. The meadows are divided by Sharney Brook and Burroway Brook and include Sharney Meadow, Norton Meadow, Burroway Meadow and Bourton Meadow, which are illustrated on the tithe map *Map of District comprising Burroway Meadow, Charney otherwise Sharney Meadow, Norton Meadow, and also certain the lands lying with the parish of Blackbourton in the County of Oxford 1844*. There is also a plot located next to the Thames, within Burroway Meadow called Bibury Ham. Both Sharney Meadow and Burroway Meadow have areas of doles marked on the 1844 map. The meadow is accessed via a trackway from Weald, mapped on the Epoch 1 25" OS and crossing via Sharney Bridge. Trackways then cross each of the meadows via bridge across the Burroway Brook. The 1811 OS drawing for Bampton shows this lane running down to Sharney's meadow, but there is also a droveway from Clanfield which crosses Hams Ford into Sharney's Meadow via Rye Meadow which is in Clanfield parish (Figure 39, Droveway 11).

Associated monuments: SM LEN [1013417](#) Burroway Enclosure.

Source: Epoch 1 25" OS; *Map of District comprising Burroway Meadow, Charney otherwise Sharney Meadow, Norton Meadow, and also certain the lands lying with the parish of Blackfournton in the County of Oxford 1844*.

Extent: 190.07 acres; this FPM covers 10% of the floodplain.

Confidence level: 5

## 5.6. Clanfield Parish (Thames)

The parish of Clanfield covers an area of 1797.7 acres of which 605.2 acres (33.7% of the parish) are located within the modern floodplain (Figure 39). A total of 253.5 acres (14 % of the total area of the parish) was identified as FPM, and these meadows occupy 42% of the floodplain.

The settlement of Clanfield is located to the west of Weald and is located outside of the floodplain approximately 2 km from the Thames. It is recorded in Domesday as having 31 households and 100 acres of meadow. Occupation in this area is known back into the prehistoric period, and there are barrows located outside of the modern floodplain in the field adjacent to Marsh Lane. The medieval settlement was located around the church (which dates from the 11<sup>th</sup> century). There is a large area of potential common meadow, situated to the south-east of Clanfield.

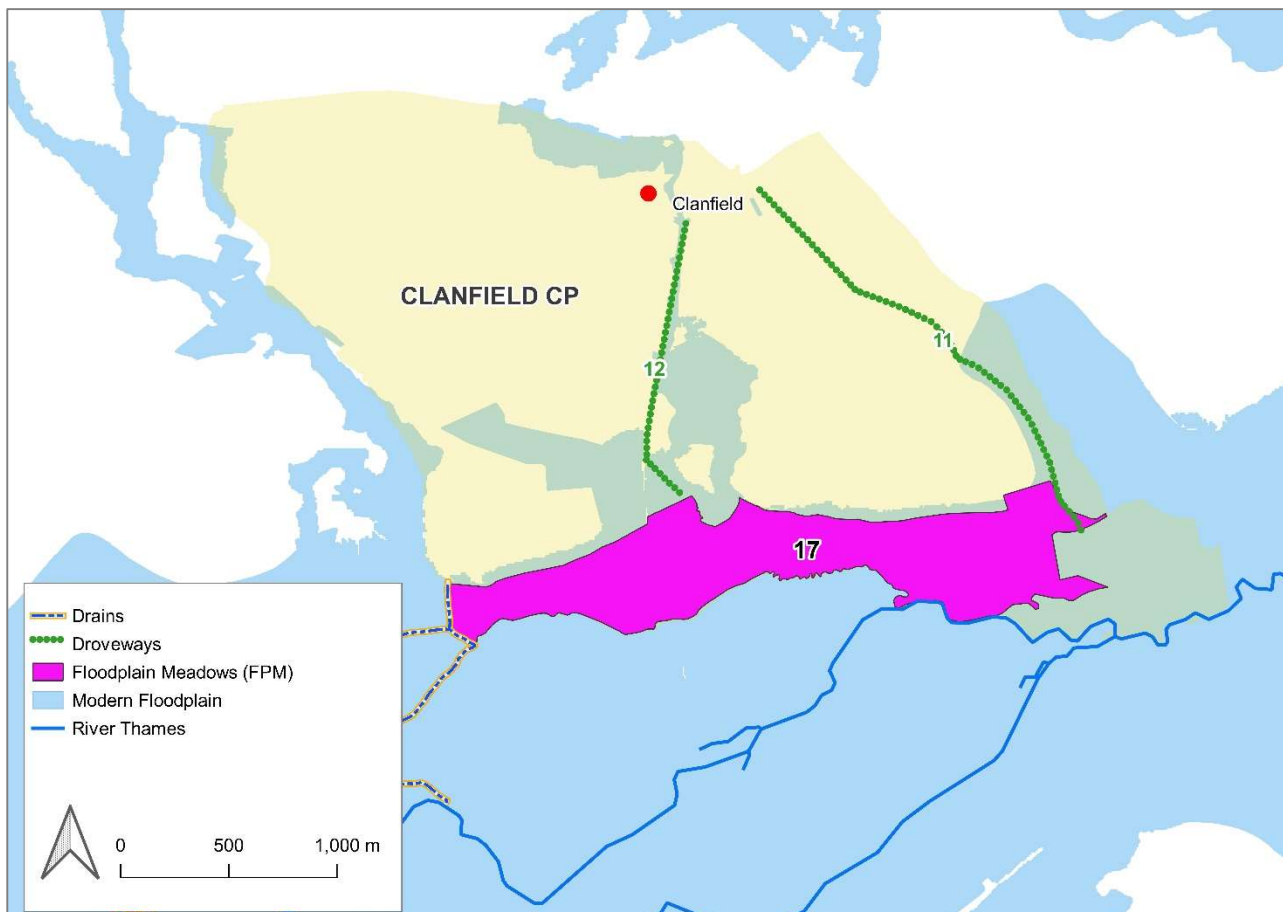


Figure 39 Location of FPM identified at Clanfield.

### FPM 17 Langley, Moors, Fore Meadow and Rye Meadows at Clanfield

The FPM at Clanfield is made up of four separate meadows: Langley Meadows, Moors, Fore Meadows, and Rye Meadows. Moors, Fore Meadows, and Rye Meadows were all common meadow in the 13<sup>th</sup> century<sup>39</sup>, but it is possible that Langley Meadows may have been common meadow too before was enclosed. Evidence of doles is limited to one area of Langley Meadows, where a very small number of partial doles are recorded on the tithe map, documented as plots 211a to 211d. The cultivation type for these plots recorded in the apportionment is meadow, while the surrounding plots in this area were all pasture or arable.

Rye Meadows adjoins Sharney Meadows and on the 1839 tithes for Clanfield and Black Bourton parishes, these areas are recorded separately with Sharney and Burroway being part of the Black Bourton parish, while Rye is part of Clanfield. However, in 1839 Sharney Meadow and Burroway

<sup>39</sup> <https://www.british-history.ac.uk/vch/oxon/vol15/pp130-139>.

were incorporated into Clanfield; but it is possible that common rights were retained by the inhabitants of Black Bourton. There are two droveways (now roads) that lead to the FPM (Figure 39, Droveways 12 and 11). Droveway 12 from Clanfield is shown on the 1811 OS drawing for Bampton as leading off the High Street to what may be a funnel shaped opening next to Prime Court, into Fore Meadow. Droveway 11 crosses at Hams Ford into Sharney's Meadow via Rye Meadow.

Associated monuments: SM LEN [1013417](#) Burroway Enclosure.

Source: Epoch 1 25" OS; Map of District comprising Burroway Meadow, Charney otherwise Sharney Meadow, Norton Meadow, and also certain lands lying with the parish of Blackfournton in the County of Oxford 1844.

Extent: 253.47 acres; this FPM covers 41.88% of the floodplain.

Confidence level: 5

### **5.7. Grafton and Radcot Parish (Thames)**

The parish of Grafton covers an area of 1065.8 acres of which 831.3 acres (78% of the parish) are located within the modern floodplain (Figure 40). A total of 211.86 acres (19% of the total area of the parish) was identified as FPM.

#### **Grafton**

The settlement of Grafton lies just outside of the floodplain, on a small raised area of sand and gravel, surrounded by floodplain, in the norther east of the parish. Grafton was recorded in Domesday as having a population of 12 households and 63 meadows, but occupation here goes back into the Neolithic.

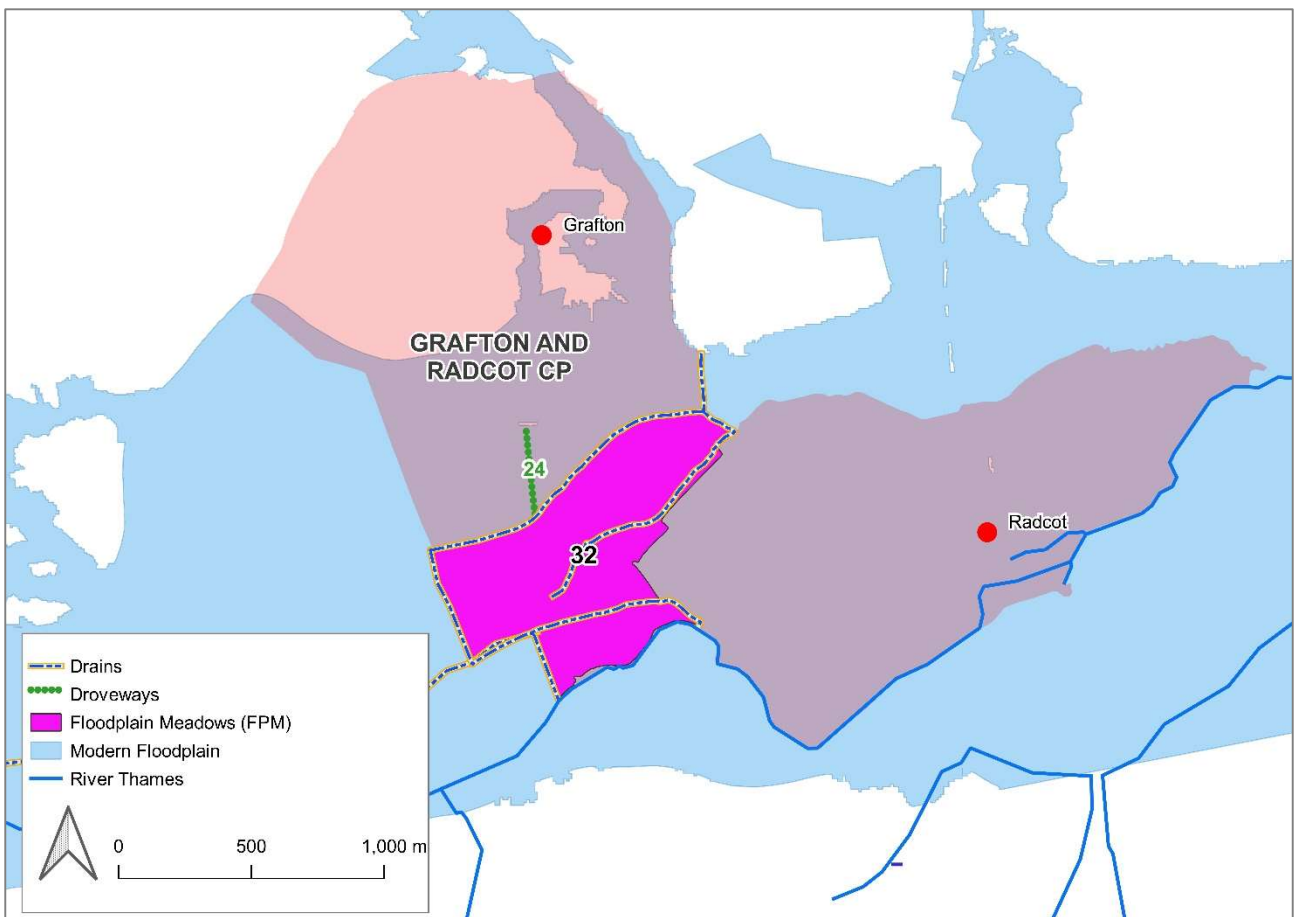


Figure 40 Location of FPM identified at Grafton.

### FMP 32 High and Thames Meadow

FPM 32 included plots where the cultivation type was meadow: the names of the plots include Allotment in High Meadow and Allotment in Thames Meadow. Access to the common meadow is via a droeway (Figure 40, Droeway 24) that comes from the main settlement across Cowleaze Common onto the common meadow. The earliest part of the meadow is thought to be directly by the Thames (Allotments in Thames Meadow) while the Allotments in High Meadow are of 18<sup>th</sup> century date<sup>40</sup>. By the time of the tithe map the meadows had been enclosed and any evidence of doles – other than the reference to allotments in the plot names – had already gone. By 1846, the commons became enclosed and fell into private ownership.

Source: Plan of the District of Grafton in the parish of Langford 1844.

Extent: 141.3 acres; this FPM covers 17.27% of the floodplain.

Confidence level: 4

### Radcot

Radcot is a small, low lying hamlet forming part of the parish of Grafton and Radcot in the hundred of Bampton (Figure 41). It has no entry in Domesday, but the VCH<sup>41</sup> suggested it probably had no more than about 35 households during the medieval period and that the settlement was probably established before 1066.

<sup>40</sup> <https://www.british-history.ac.uk/vch/oxon/vol17/pp233-249#h3-0014>.

<sup>41</sup> <https://www.british-history.ac.uk/vch/oxon/vol17/pp250-269#h2-0001>.



The VCH refers to the meadow in 1219 as belonging to Maud and William d'Avranches who held 49 acres of meadow, and 5 'hams'; there are five hams recorded in the tithe apportionment records. Other plots surrounding this small hamlet – notably Flat Mead and Thames Mead to the east of FPM 27 – suggest they may have been further meadow at some time.

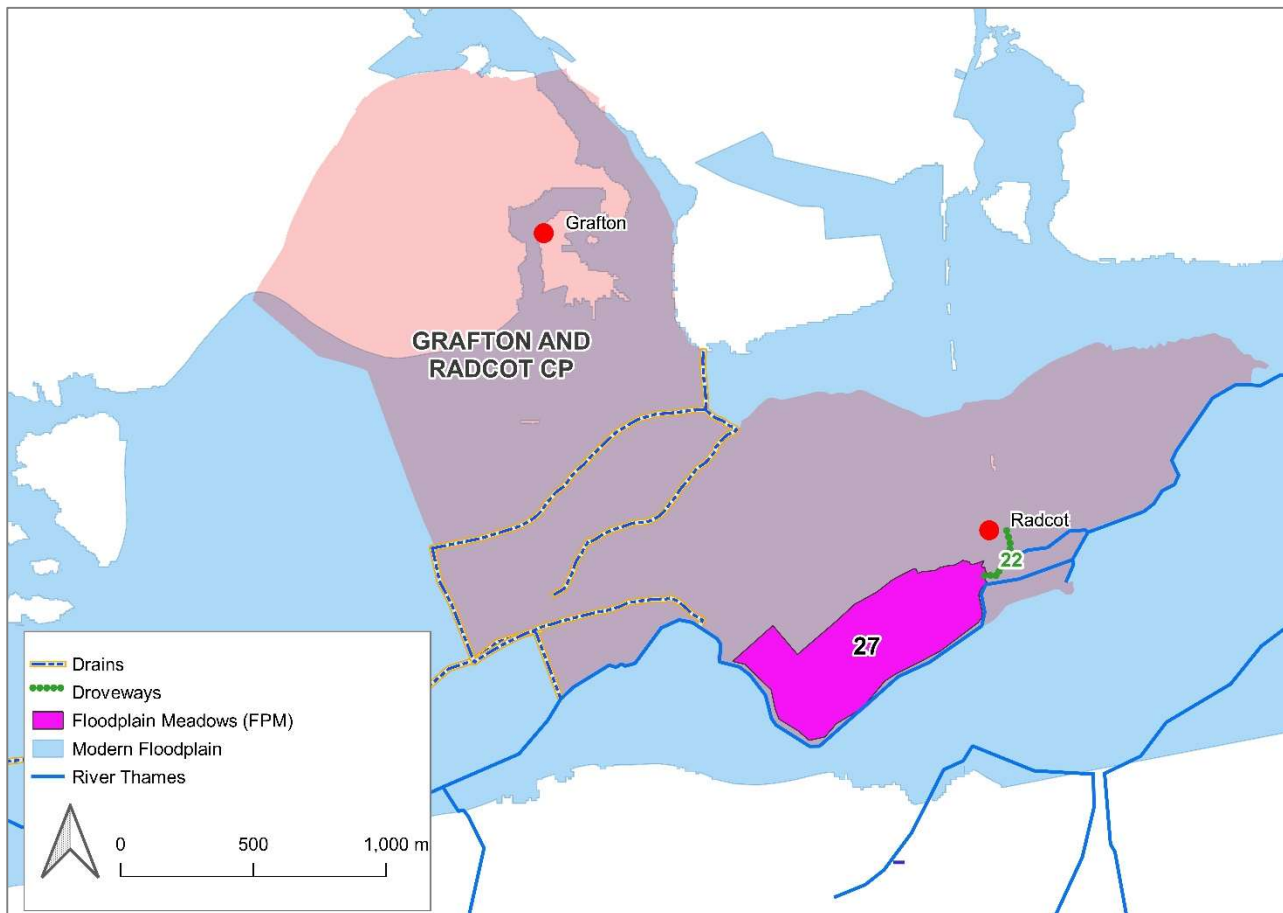


Figure 41 Location of FPM identified at Radcot, in Grafton Parish

#### FPM 27 Rye Mead and Priest Meadow at Radcot

This FPM was made up of Past Meadow (plot 24), The Eight Acres (plot 23), and Rye Mead (plot 21). It is difficult to see how the meadow was accessed from Radcot: to the north of the FPM is The Garrison, with ditches and a channel along its southern boundary; while on the eastern boundary of the FPM there is a leat from the Thames. However, the tithe map shows a small opening or bridge across the leat, and this is shown as a footbridge on the Epoch 1 25" OS (Figure 41, Droveway 22).

Associated monuments: SM LEN [1006361](#) Radcot Bridge.

Source: Map of the Parish of Radcot in the Counties of Berks and Oxon 1840.

Extent: 70.57 acres, this FPM covers 8.63% of the floodplain.

Confidence level: 5

#### 5.8. Kelmscott Parish (Thames)

The parish of Kelmscott covers an area of 1035.6 acres of which 878.7 acres (84.8% of the parish) are located within the modern floodplain (Figure 42). A total of 145.3 acres (16.53% of the total area of the parish) was identified as FPMs, occupying 17% of the floodplain.

The settlement of Kelmscott does not appear in Domesday as Kelmscott; rather, it is an outlier settlement that was part of Broadwell Manor, and it is likely that part of the Domesday record for Broadwell includes Kelmscott villagers and lands. The church at Kelmscott is 11<sup>th</sup> century and probably located in the oldest part of the village, situated just outside the floodplain; while the medieval settlement is located closer to the river in the vicinity of Kelmscott Manor. The VCH<sup>42</sup> suggests that in 1279, 28 households were living at Kelmscott. There are no tithe maps available for this area so the plot names or cultivation types could not be examined. However, the form of the FPM was clearly visible on the Epoch 1 25" OS and Rocque's map of 1761.

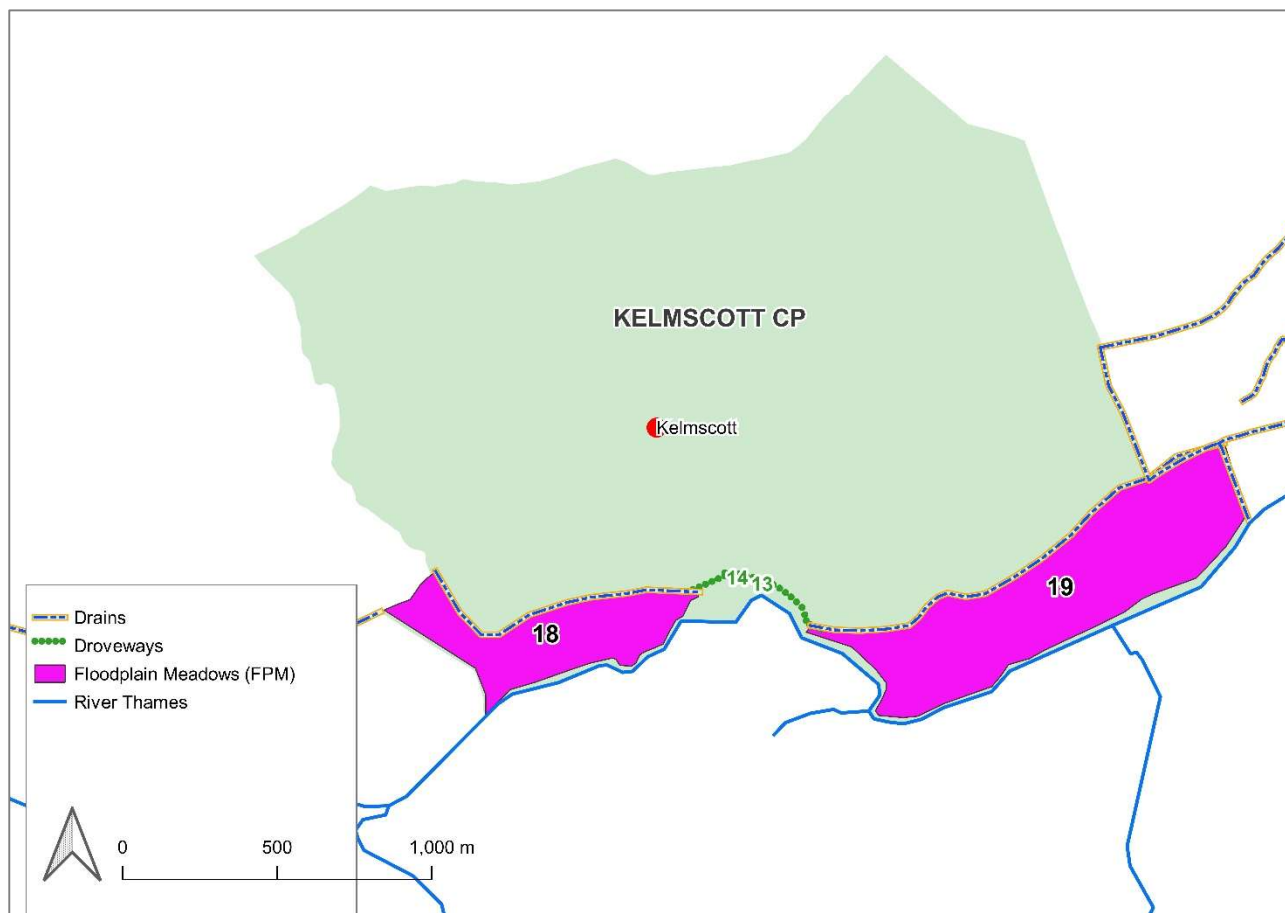


Figure 42 Location of FPM 18 and FPM 19 identified in Kelmscott Parish.

### FPM 18 Kingsham Meadow

FPM 18 Kingsham Meadow – which lies to the east of Kelmscott – was initially identified from the Epoch 1 25" OS, where the form of the meadow stands out from the surrounding enclosed fields. This FPM bears great resemblance to those found on the Dorset Stour, having a clear funnel-shaped entrance; a droveway from the settlement leading to it; one boundary formed by the river; and the other irregular boundary reflecting the edge of the modern floodplain.

The FPM is accessed from Droveway 13 (Figure 42), which runs from Kelmscott Manor to the funnel-shaped entrance that leads into the meadow. There is a back drain running along its northern boundary: this drain has been mapped on the Epoch 1 25" OS and later maps but is not mapped on the earlier 1811 OS drawing for Bampton. While there is no tithe map available for this parish, the VCH<sup>43</sup> shows this area as meadow and notes that the area includes lot meadow. The location of this meadow is within the area where the risk of flooding is at its highest.

<sup>42</sup> <https://www.british-history.ac.uk/vch/oxon/vol17/pp111-145#h2-0009>.

<sup>43</sup> <https://www.british-history.ac.uk/vch/oxon/vol17/pp111-145#h3-0002> Figure 33.

Extent: 43.91 acres; this FPM covers 5% of the floodplain.

Associated monuments: SM LEN [1006326](#) Settlement Site (Medieval); 1006325 Trackways 460m east of St Georges Church.

Source: Epoch 1 25" OS; OS 1811 Survey Drawing; VCH.

Confidence level: 5

#### **FPM 19 Westham Meadow and Bull Mead at Kelmscott**

FPM 19 Westham Meadow and Bull Mead at Kelmscott is located to the west of Kelmscott and is accessed via a small lane near the Manor. As with FPM 18, this meadow was identified initially on the Epoch 1 25" OS and then confirmed with the information on Figure 33 in VCH<sup>44</sup>.

The meadow is boarded by the Thames along its southern edge and there is a drain along its northern boundary. The funnel-shaped entrance is not as marked as the entrance for FPM 18 but Droveaway 14 (Figure 42) runs from the Manor House to this area on the Epoch 1 25" OS.

Associated monuments: SM LEN [1006326](#) Settlement Site (Medieval); SM LEN [1006325](#) Trackways 460m east of St Georges Church.

Source: Epoch 1 25" OS; OS 1811 Survey Drawing; VCH.

Extent: 101.41 acres; this FPM covers 11.54% of the floodplain.

Confidence level: 5

### **5.9. Lechlade Parish (Thames)**

The parish of Lechlade covers an area of 4010 acres of which 1957.7 acres (48% of the parish) are located within the modern floodplain (Figure 43). A total of 526.8 acres (13% of the total area of the parish) was identified as FPM, and these meadows occupy 27% of the floodplain.

The settlement of Lechlade is located close to the Thames, in the county of Gloucestershire and close to the border of Wiltshire and Berkshire. Settlement was known here from the prehistoric, Roman and early medieval periods. The earliest church is 13<sup>th</sup> century: Lechlade was an important inland port throughout the post-medieval period.

Lechlade was in the hundred of Brightwells Barrow and had a population of 56 households recorded in Domesday. The acreage of meadow was not recorded in Domesday, but VCH<sup>45</sup> notes that in 1086 the meadows were very extensive, and identifies two meadows: the first is a large common lot meadow called Town East Meadow; and the second is smaller common meadow called Town Rumsey to the south-west of Lechlade.

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<sup>44</sup> <https://www.british-history.ac.uk/vch/oxon/vol17/pp111-145#h3-0002> Figure 33.

<sup>45</sup> <https://www.british-history.ac.uk/vch/glos/vol7/pp106-121#p37>.

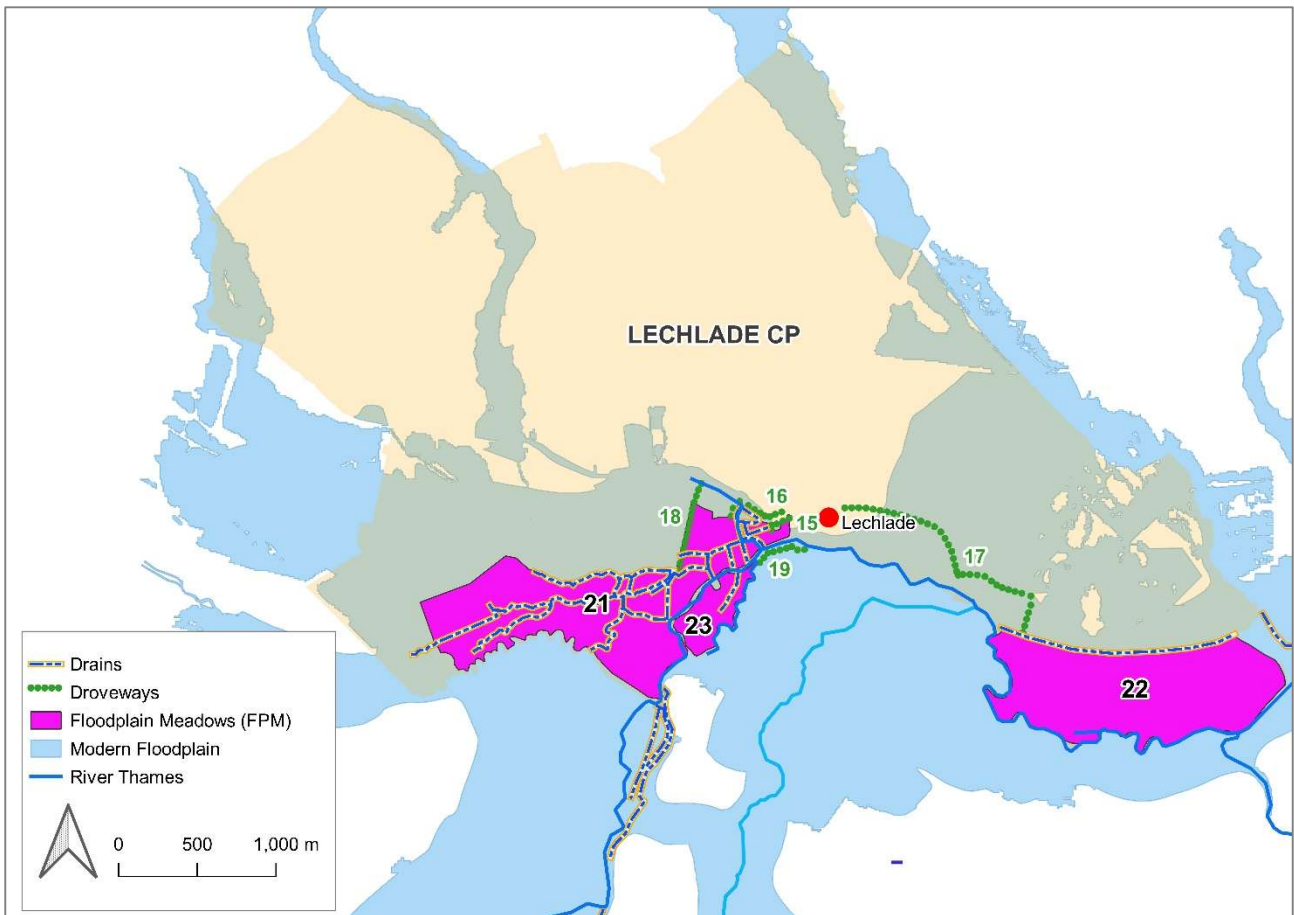


Figure 43 Location of FPM 21, 22 and FPM 23 identified in Lechlade Parish.

### FPM 21 Town Rumsey Meadow

The exact extents of this FPM, located to the south-west of Lechlade and referred to as Town Rumsey Meadow in the VCH, are not clear. The tithe map shows the area post enclosure, so boundaries and doles of the FPM are no longer visible on the tithe.

The only indication of the former meadow is from plot names and the cultivation type on this 1839 tithe map, which enables at least part of the former common meadow to be identified. Meadow related plot names include Old Coin Mead (plot 309), the Long Meadow (plot 288) and Inglesham Meadow (plot 327). In the southernmost area of the FPM, an area of possible former doles are visible: all these plots are named 'In Town Rumsey' (plot numbers 342, 344 to 351), reflecting the Town Rumsey meadow name. There is also a plot name Rumsey located immediately north of these plots.

The true extent of the northern area of this FPM is not clear. The northern boundary that has been selected follows the route of what is assumed from the tithe to be a back drain with various channels coming off it that extend across the entire area of the FPM. It is not clear how the different areas are accessed: plots 394 and 395 show a small footbridge but this is the only bridge mapped. On the tithe, these drains and channels are marked as a double line which is keyed blue on the tithe, compared to the single line of the field boundaries. On this tithe map, plots are keyed according to their cultivation type, so fields that are arable are edged in yellow, while pasture is edged in green. Rivers are shaded with blue ink. It is possible that the plots aligned with the road that is now the A417 Lechford to Fairford Road were also formerly part of this FPM. The modern risk of flooding for these plots adjacent to the road is indicated as very low, but there is a single plot aligned against the road which is called In Town Rumsey (plot 245). Adjoining this plot to the south is a plot name Broad Leaze (plot 247), while plot 234 – West Hays – is one plot to the east of this.

These two plots, and those level with them, are just within the modern high risk of flooding zone. It is possible that the meadow originally extended up to the road and that this whole area was once part of the FPM. The tithe records show that most of the plots in this area are arable – except for the plots mentioned. The 1816 OS drawing for Cirencester does not provide any insight as to the extents of the meadows.

Access to the meadow could have been via three possible entrances to FPM 21, identified as Drovers 15, 16 and 18 (Figure 43): although these are more like turnings into the plots from the road, rather than droveways. Both Drovers 15 and 16 turn off the Lechlade High Street into narrow funnel-shaped entrances of two separate plots: Droeway 15 turns into plot 388 Upper Moor; and Droeway 16 turns into plot 396 Leatherham. These entrances are only separated by two plots (393 and 397). The third drove, Droeway 18, is a droeway or lane that turns off the Lechlade to Wellford Road, which joins Lechford High Street after it has passed the northern boundary of the area of the meadows. This droeway would have provided a direct route to this FPM from Lechlade.

Extent: 257.85 acres; this FPM covers 13.17% of the floodplain

Associated monuments SM LEN 1003443 Settlement South of Claydon Cottages.

Source: Map of the Parish of Lechlade in the County of Gloucester 1839.

Confidence level 3

### **FPM 22 Town East Meadow**

FPM 22 Town East Meadow is located to the south-east of Lechlade and is in an area where some of the plots are named In Town Meadow. Although the tithe does not show any evidence of doles, VCH<sup>46</sup> records that there was a common lot meadow here. It was accessed from Droeway 17 from the Kelmscott Road located to the east of Lechlade (Figure 43). This FPM has Iron Age and Romano British settlement remains within the eastern area of the meadow.

Extent: 237.6 acres this FPM covers 12.14% of the floodplain.

Associated monuments: SM LEN [1011604](#) Iron Age and Romano British settlement remains 1km east of Leaze Farm.

Source: Map of the Parish of Lechlade in the County of Gloucester 1839; Epoch 1 25" OS.

Extent: 237.6 acres this FPM covers 12.14% of the floodplain

Confidence level: 4

### **FPM 23 Widney Mead, Lechlade**

Widney Mead is located on the opposite side of the Thames to Town Rumsey Meadow. Access was possibly via a continuation of the droeway from the High Street that crosses Town Rumsey Meadow, then across the Thames at Round House onto the tow path (Figure 43). There is a funnel-shaped entrance but no evidence of any doles.

Extent: 31.31 acres; this FPM covers 1.6% of the floodplain.

Associated monuments: SM LEN [1017921](#) Medieval Settlement remains at Inglesham.

Source: Map of the Parish of Lechlade in the County of Gloucester 1839, Epoch 1 25" OS

Confidence level: 5

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<sup>46</sup> <https://www.british-history.ac.uk/vch/glos/vol7/pp106-121#anchorn219>.



### 5.10. Inglesham Parish (Cole)

The parish of Inglesham covers an area of 1241.9 acres of which 672.7 acres (54.2% of the parish) are located within the modern floodplain (Figure 44). A total of 205 acres (16.5% of the total area of the parish) was identified as FPM, and these meadows occupy 30.5% of the floodplain. The parish is bounded by the River Cole to the east and the River Thames to the west and north. At one time it was part of Berkshire, but in 1844 it became part of Wiltshire. The main settlement is at Upper Inglesham, which lies to the south of Inglesham.

Five FPMs were identified in the parish (Figure 44), with three associated with the small hamlet at Inglesham; one associated with the main settlement at Upper Inglesham; and the final FPM associated with a mill located in the centre of the parish.

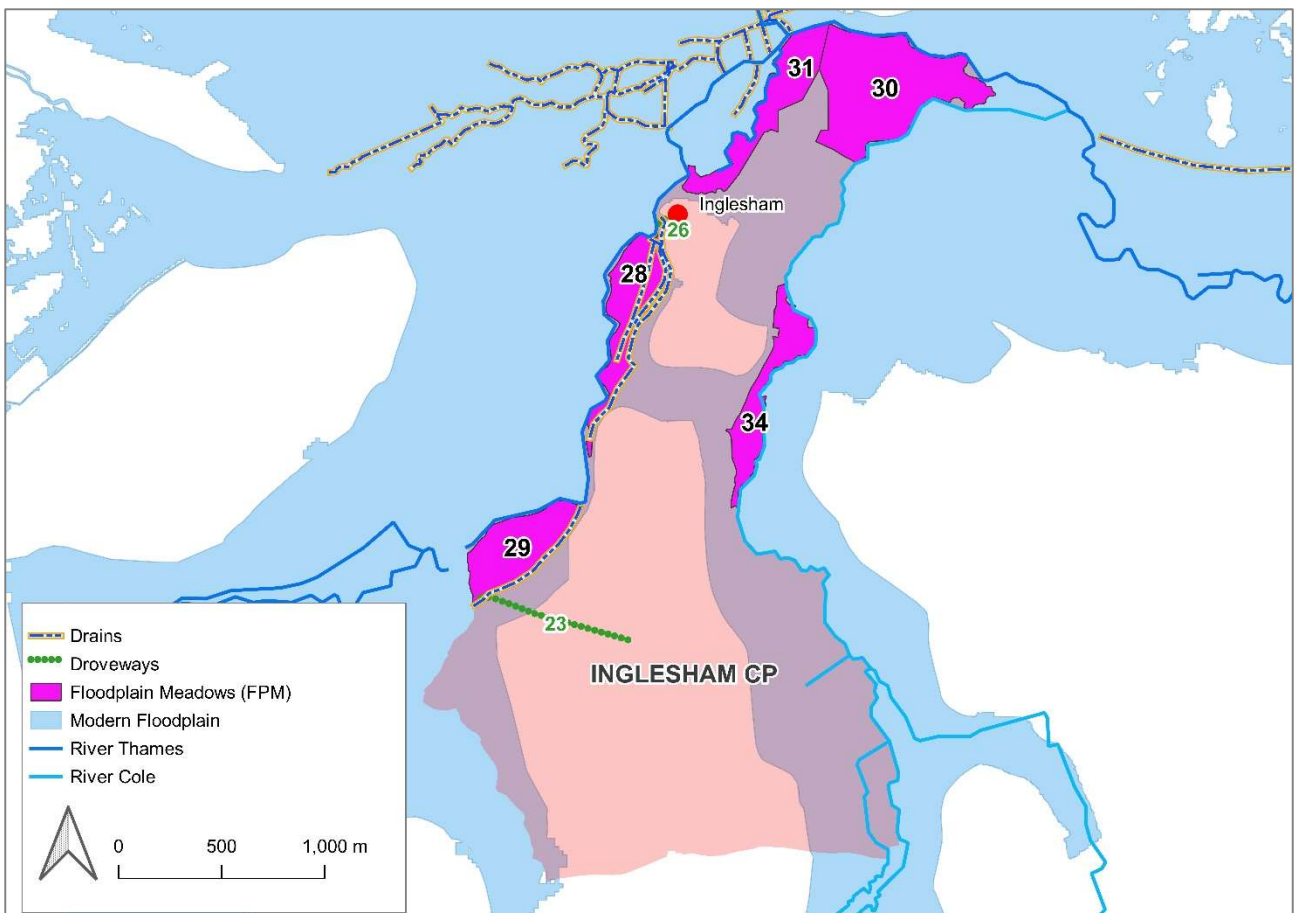


Figure 44 Location of FPM 28, 29, 30 and FPM 31 identified in Inglesham Parish.

### Inglesham

Inglesham was not recorded in Domesday but there is known medieval settlement to the east of the hamlet, where there is a scheduled monument: Medieval settlement remains at Inglesham, SM LEN [1017921](#). The remains of this settlement are visible in the lidar data (Figure 45). A possible hollow way can be seen extending in a y-shape from the settlement, which may have connected the settlement to Plot 50 The Meadow, part of FPM 31.

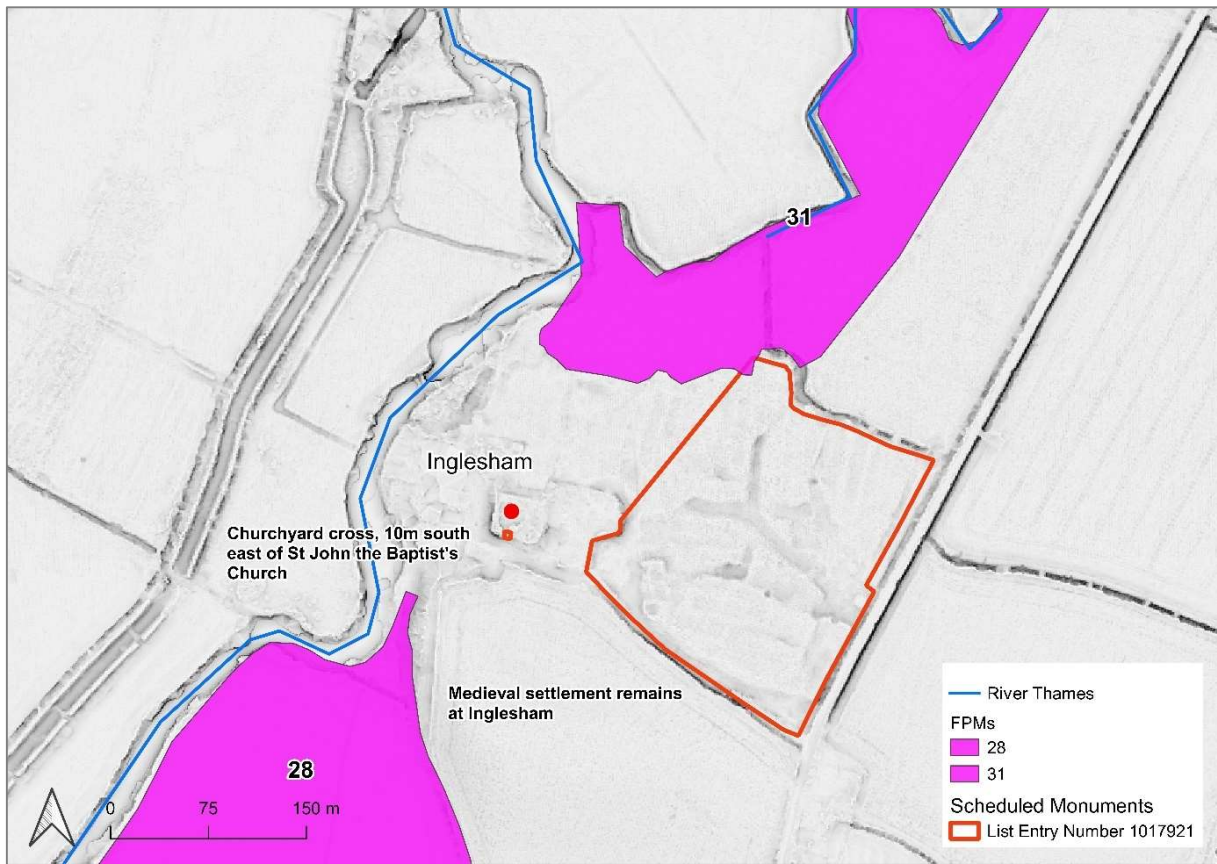


Figure 45 Lidar showing the medieval settlement remains at Inglesham.

### FPM 28 Water Ham, Inglesham

FPM 28 Water Ham is located to the south of Inglesham and is bordered on its western boundary by the Thames. The tithe shows multiple doles at one end that are named as 'Allotment in Water Ham' or variations on this name. There is a funnel-shaped entrance near the church at Inglesham and a possible trackway or droveway (Figure 44, Droeway 26) from the lane next to the Church, which is now a right of way. Lidar shows a series of parallel drainage channels from a bedwork water meadow across this FPM, showing that the water meadow developed from a floodplain meadow.

Associated monuments: SM LEN [1017921](#) Medieval Settlement remains at Inglesham.

Source: Map of the Parish of Inglesham in the Counties of Wiltshire and Berks 1842.

Extent: 34.13 acres; this FPM covers 5.7% of the floodplain.

Confidence Level: 5

### FPM 30 North Meadow

FPM 30 North Meadow is bordered on its northern boundary by the Thames and by the Cole on its eastern boundary. The whole area is covered in multiple doles which are mapped on the tithe map. Most of these doles are named 'Allotment in North Meadow First Crop'. The FPM is cut by the road from Lechlade, and it is not clear from the sources where any droveway to the FPM might have been located. The area of the modern risk of flooding almost fills the space between the Thames, the Cole and Inglesham and it is here that this FPM and FPM 28 are situated. It is possible that these two FPMs formed a single meadow at some point in time, which was later divided by the

crossing at Lechlade and its associated road that traverses the floodplain to Inglesham and beyond. The lidar data shows channels and drains for a bedwork water meadow across this area.

Extent: 76.06 acres; this FPM covers 11.31 % of the floodplain.

Associated monuments: SM LEN [1017921](#) Medieval Settlement remains at Inglesham; SM LEN [1003424](#) Halfpenny Bridge.

Source: Map of the Parish of Inglesham in the Counties of Wiltshire and Berks 1842.

Confidence Level: 4

### **FPM 31 Allotment in Water Ham/Goose Meadow/Goose Meadow and Marsh Meadow**

This FPM is located adjacent to Inglesham and is bordered on its western boundary by the Thames. It is made up of three plots: Allotment in Water Hams/Goose Ham First Crop (plot 58); Marsh Meadow (plot 40); and The Meadow (plot 50). There are no doles mapped in these meadows but use of the term 'allotment' indicates that this area had doles at one point. There is no clear driveway to the FPM but it may have been accessed via a hollow way, which is visible on lidar from the scheduled medieval settlement heading towards the southern part of this FPM in the area of The Meadow (plot 50).

Associated monuments: SM LEN [1017921](#) Medieval Settlement remains at Inglesham; SM LEN [1003424](#) Halfpenny Bridge.

Source: Map of the Parish of Inglesham in the Counties of Wiltshire and Berks 1842.

Extent: 32.58 acres; this FPM covers 4.84% of the floodplain.

Confidence Level: 4

### **FPM 34 Mill Mead and Bleacham**

FPM 34 is located to the south-west of the parish of Inglesham and is recorded in the tithe as Mill Mead and Bleacham; the mill is drawn on Rocque's map of 1761. There is an apparent funnel-shape that is visible on all the historic maps where a channel crossing from the Thames to the Cole meets a drain. However, an entrance to this FPM could not be positively identified. There are no doles visible on the mead and it was probably in private ownership at the time of the tithe map.

Associated monuments: SM LEN [1017921](#) Medieval Settlement remains at Inglesham; SM LEN [1003424](#) Halfpenny Bridge.

Source: Map of the Parish of Inglesham in the Counties of Wiltshire and Berks 1842.

Extent: 28.24 acres; this FPM covers 4.2 % of the floodplain.

Confidence level: 4

## **Upper Inglesham**

Upper Inglesham is the main settlement for the parish but is not recorded as a settlement in Domesday.

### **FPM 29 Hemmings Mead**

FPM 29 Hemmings Mead is located to the west of Upper Inglesham with the Thames as its north-east boundary. The FPM is recorded as Plot 11 Hemmings Mead and the cultivation type was pasture at the time of the tithe. There were no doles marked on the tithe map. The lidar data shows

medieval open field systems with furlongs respecting the boundaries of the FPM, demonstrating that the meadow was in existence either prior to or at the time of these open fields. Droveaway 23 connects this FPM to Upper Inglesham during the early 19<sup>th</sup> century (Figure 44). This droveaway is mapped both on the 1816 OS drawings (Cirencester) and on the *Map of the Parish of Inglesham in the Counties of Wiltshire and Berks 1842*. The lidar data shows that this droveaway cuts across the medieval open fields, which means that the droveaway is later than the medieval fields. The lidar data also shows a series of channels and drains across the FPM for a bedwork water meadow system that is likely to date from the 17<sup>th</sup> century onwards. There is a possible back drain marked along the boundary of the FPM on the Epoch 1 25" OS, although this is probably associated with the bedworks.

Source: Map of the Parish of Inglesham in the Counties of Wiltshire and Berks 1842.

Extent: 33.95 acres; this FPM covers 5.05 % of the floodplain.

Confidence level: 4

### **5.11. Highworth Parish (Cole)**

The parish for Highworth covers an area of 6369.8 acres of which 817.9 acres (12.8% of the parish) are located within the modern floodplain (Figure 46). A total of 220.7 acres (3% of the total area of the parish) was identified as FPM, and these meadows occupy 27% of the floodplain.

The *Map of the Titheable Part of the Parish of Highworth in the county of Wilts 1840* for the parish of Highworth shows that at this time the parish extended further south than it does today, and that its original boundary stopped at the River Cole and included the settlement of South Marston. The modern boundary now stops at Priors Meadow by a tributary of the Cole. To the north, the settlement of Highworth and an area to the west of the River Cole is not mapped on the tithe map, but there is a boundary which is marked as 'Earl of Germany'. Unfortunately, no tithe map relating to this area could be found; and it is unclear whether this area was part of the parish at that time.

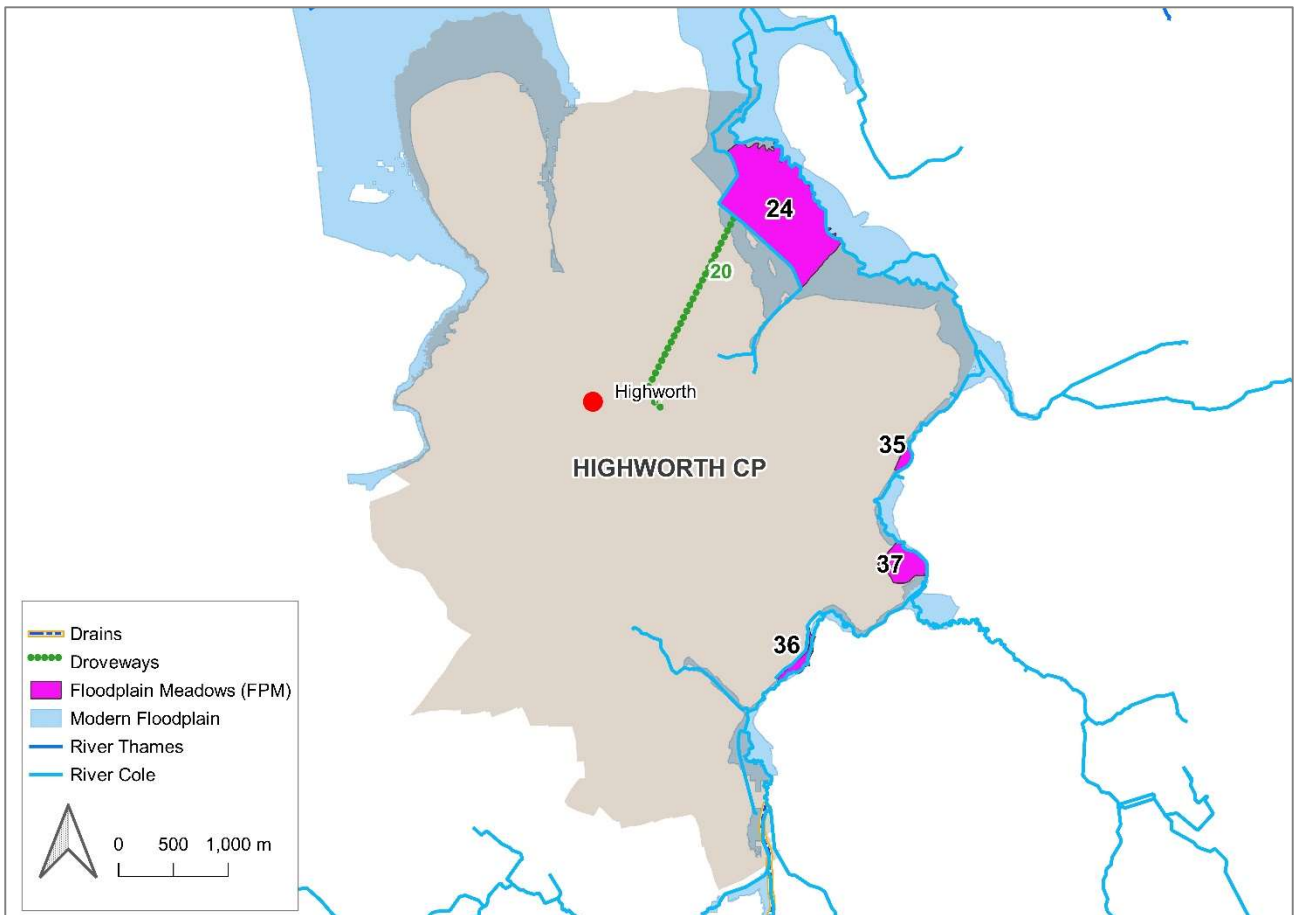


Figure 46 Location of FPM 24, 35, 37 and 36 in Highworth Parish.

The settlement of Highworth is situated out of the floodplain, approximately 3km from the River Cole. It is recorded in Domesday as having 6 households and 10 acres of meadow and was in the hundred of Highworth.

As the tithe map was not available for this area, there were no plot names available to provide indicators that might suggest the location of any FPMs. The Epoch 1 25" OS shows an area to the north-east of Highworth of later enclosed field systems that would completely obscure any earlier field systems. However, examination of Rocque's map of 1761<sup>47</sup> marks the area to the north and east of Highworth as 'fields and commo' (?common), and labels an area at the end of the common adjacent to the Cole as Town Mead. Bordering the east side of Highworth on Rocque's map is a settlement called East Thorpe: later this area is referred to as Eastrop. This is the site of a deserted medieval settlement<sup>48</sup> which is now scheduled, and the lidar data clearly shows the settlement and ridge and furrow fields that are marked on Rocque's map (Figure 47).

<sup>47</sup> 'The Twelvth Sheet of Berkshire from an Actual Survey by Jn. Rocque' available from the Royal Collection Trust, Rocque's Map of Berkshire published 1761, RCIN 700042, <https://www.rct.uk/sites/default/files/collection-online/1/6/475359-1409056416.jpg>.

<sup>48</sup> Medieval settlement and associated ridge and furrow south west of Eastrop Farm, scheduled monument SM LEN [1016310](https://www.rct.uk/sites/default/files/collection-online/1/6/475359-1409056416.jpg).



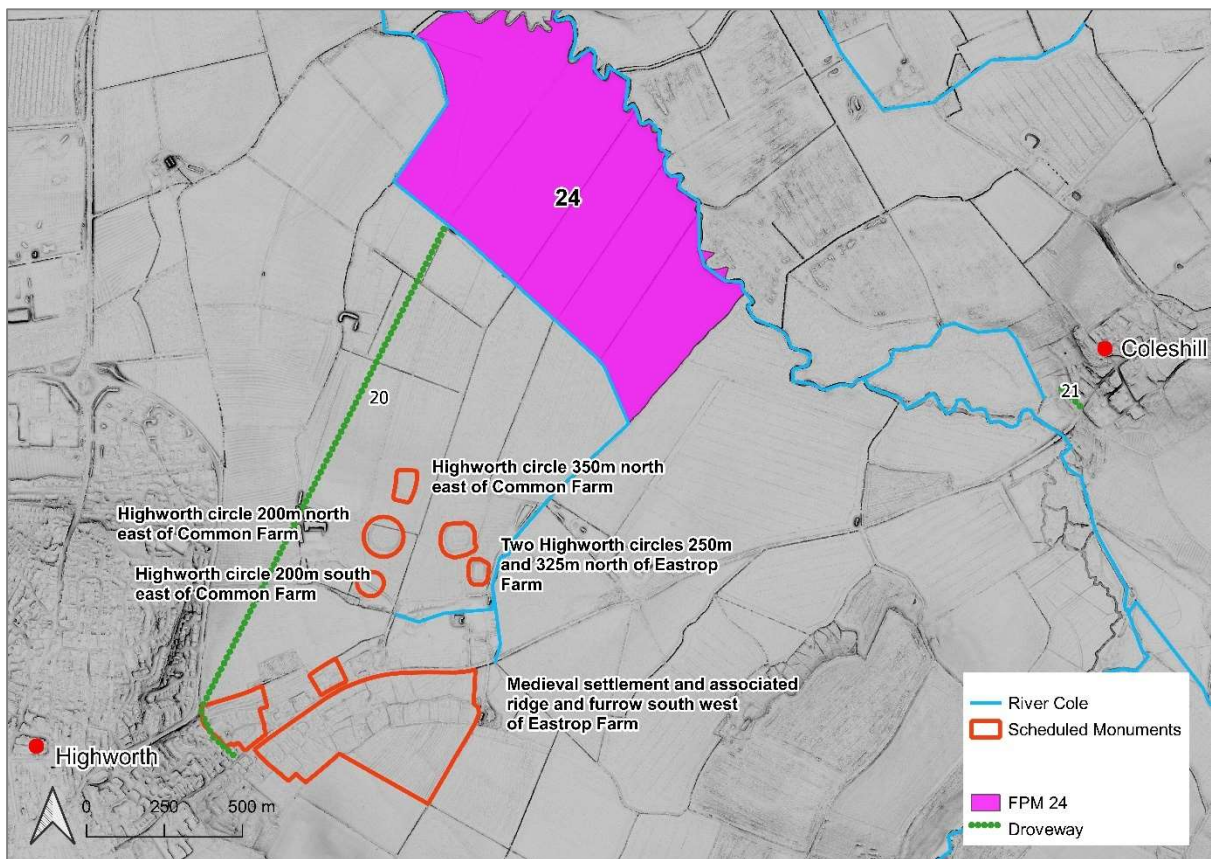


Figure 47 Lidar showing location of medieval settlement at Eastrop Farm.

### FPM 24 Town Mead

FPM 24 was identified from Rocque's map of 1761 and is located to the north-east of Highworth and Eastrop, with the Cole forming its north-east boundary. The meadow is located at the end of the common. Rocque's map shows a line marking a boundary that divides the common from the floodplain. The same boundary can still be seen on the later Epoch 1 25" OS and is still present today. FPM 24 Town Mead was accessed from a funnel-shaped entrance at East Thorpe, which opened on to the area marked as Common and shown on Rocque's map of 1761. Although there is not a droveway physically mapped on this map, it is likely there would have been a route across the common to Town Mead (Figure 46, Droveway 20). The Epoch 1 25" OS shows Common Farm situated on the former common, within the enclosed fields. It is not known whether there were doles across this area; certainly there is nothing on Roque's map to indicate doles. The east half of the FPM has channels and drains relating to a bedworks system visible in the lidar data.

Associated monuments: SM LEN [1016310](#) Medieval settlement at Eastrop Farm and associated ridge and furrow; SM LEN [1018222](#) and SM LEN [1016390](#) Highworth Circles.

Source: Roque's Map of Berkshire 1761.

Extent: 181.8 acres; this FPM covers 22.25% of the floodplain.

Confidence Level: 4

### FPM 35 Little Mead at Fresden Farm, Highworth

This is a very small FPM located on the Cole in the south-east of the parish of Highworth with the Cole forming its eastern boundary. The modern floodplain at this point is quite restricted and narrow, reflected in FPM being long and thin. The plot is marked on the tithe for Highworth as Little Mead (plot 92, cultivation type pasture) but there are no doles recorded. The 1811 OS drawing for

Wantage, and Rocque's map of 1761 for Berkshire, both record Maggot Mill just set back from the river in this location, which may mean that this FPM was owned by the mill owners. In the same locale there is a medieval settlement remains at Fresden Farm (scheduled monument SM LEN [1016311](#)). The lidar data shows remains next to the FPM including a possible leat and mill pond, hollow way and building platforms.

Associated monuments: SM LEN [1016311](#) Medieval Settlement remains immediately south-east of Fresden Farm.

Source: Map of the Titheable Part of the Parish of Highworth in the county of Wilts 1840; Roque's Map of Berkshire 1761.

Extent: 4.46 acres; this FPM covers 0.55% of the floodplain.

Confidence Level: 4

### **FPM 36 Fryers Loverham, Highworth**

FPM 36 is a small FPM in the south of the parish of Highworth near Sevenhampton, tentatively identified as a possible FPM based on its form. The Cole forms the eastern boundary of the FPM. Channels and drains across the FPM indicate a former bedworks system. A back drain is visible in the lidar data and is also mapped on the Epoch 1 25" OS. There is no clear access to the FPM; however, there is a footpath marked on the Epoch 1 25" OS that crosses the FPM and continues over the Cole via a footbridge.

Extent: 8.5 acres; this FPM covers 1.04% of the floodplain.

Source: Map of the Titheable Part of the Parish of Highworth in the county of Wilts 1840.

Confidence Level: 2

### **FPM 37 Great Meadow. Highworth**

FPM 37 Great Meadow is made up of two smaller plots – Great Meadow (plot 124) and Lammas Piece (plot 125) – which suggests that they were once part of a larger, now lost, common meadow. The enclosure of the fields surrounding these two plots makes any identification of its earlier form difficult: there is little on the tithe map to show its extents; there are no doles; and no evidence of a funnel-shaped entrance with a drove. The only indication that these two plots were once part of a larger common is the reference to Lammas.

Source: Map of the Titheable Part of the Parish of Highworth in the county of Wilts 1840.

Extent: 25.93 acres; this FPM covers 3% of the floodplain.

Confidence Level for identification of this meadow is 3

## **5.12. Coleshill Parish (Cole)**

The parish for Coleshill covers an area of 2334 acres of which 316.1 acres (13.5% of the parish) are located within the modern floodplain (Figure 48). A total of 246.6 acres (11% of the total area of the parish) was identified as FPMs and these meadows occupy 78% of the floodplain.

Coleshill lies partly within Wiltshire and partly within Berkshire and was in the Hundred of Highworth. To the east, the parish is bordered by the River Cole with the settlement situated close to the river, just outside of the modern medium risk of flooding zone. The parish has a second detached area that is located within the parish of Inglesham. At the time of the tithe, this detached area was mapped as being part of Coleshill parish but in the late 19<sup>th</sup> century, it was fully incorporated into Inglesham parish.

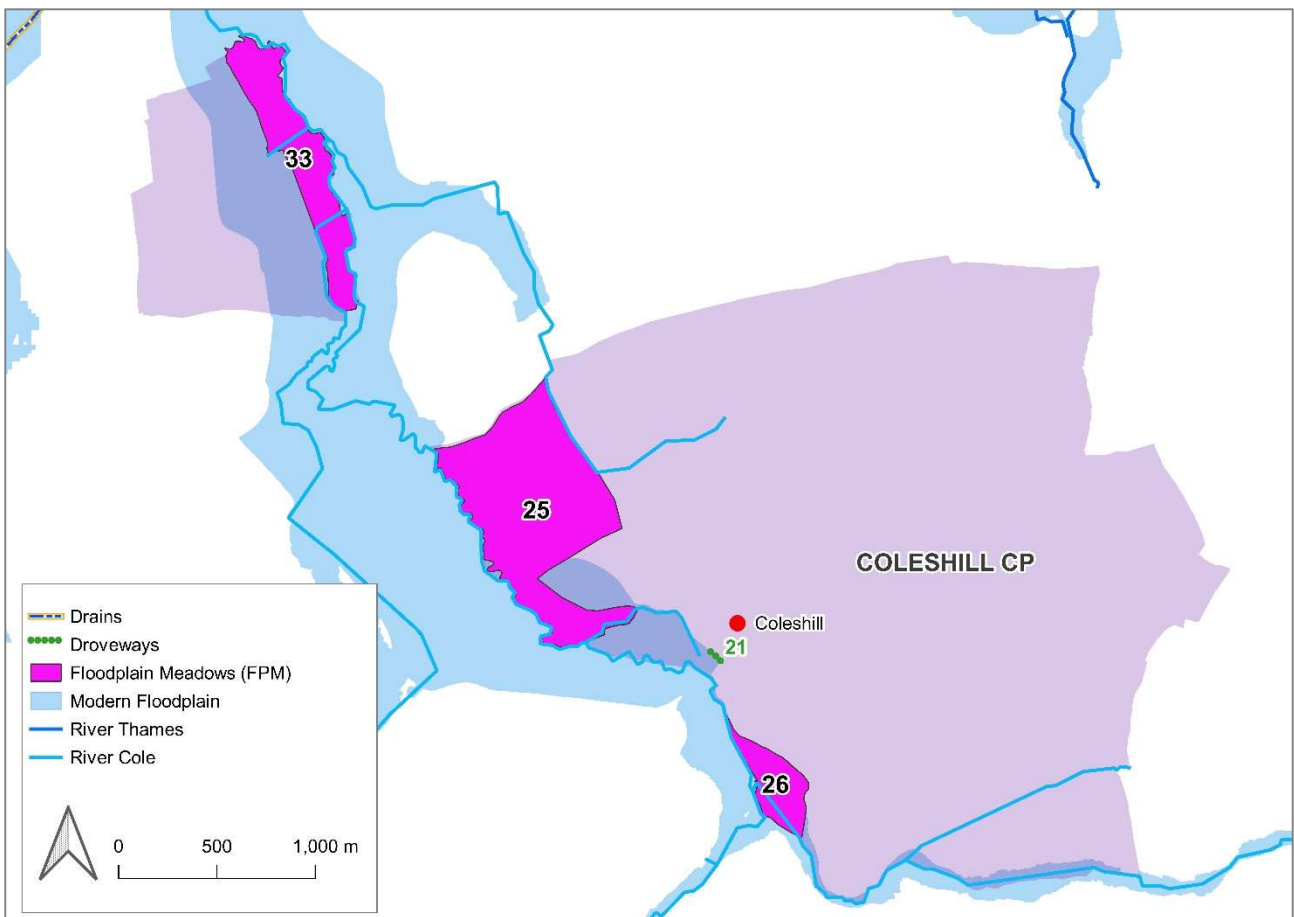


Figure 48 Location of FPMs 25, 26 and 33 at Coleshill Parish

The settlement of Coleshill was recorded in Domesday as having 34 households and 69 acres of meadow.

### FPM 25 Tenn Mead

FPM 25 Tenn Mead is located to the north-east of Colehill between the river and Snowswick Lane. Most of the plots in this area have meadow related tithe names but only Farm Mead (plot 102, 103 and 105), Thursdays Mead (plot 101), and Dean Ford Mead (plot 99) were located within the modern risk of flooding zone near the Cole. The remaining plots in this area located near the road, also have meadow related names: Wich Green Mead (plot 95); Joys Ham (plot 96); Upper Farm Mead (plot 97); Further Old Hays (plot 98); Middle Old Hays (plot 89); Lower Old Hays (plot 93); and Upper Old Hayes (plot 86). However, these plots are not within the floodplain: one possibility is that these are 'old' field names that were kept when field boundaries were rearranged during enclosure, losing the direct connection to topography and land use that their names reflected originally.

The boundaries of the FPM were identified using 1761 Rocque's map which illustrates this area as Tenn Mead. Using a combination of the tithe map and Rocque's map, the boundaries of the FPM were tentatively established, bearing in mind that this area had been enclosed by the time the tithe map was made and that the new boundaries no longer truly reflected those seen on the map of 1761. The tithe map did not show any doles across this area. Access to the FPM was probably via Droveway 21, shown on Rocque's map of 1761 as a funnel-shaped entrance that joins Coleshill Road. However, the route it takes across to Tenn Mead is not clear. This FPM is the only FPM that is not fully within the floodplain due to not being able to identify its original boundaries, which is why the confidence level for this meadow is low.

Extent: 155.63 acres; of which only 62.9 acres are located within the floodplain. This area of the FPM covers 17.42% of the floodplain.

Source: Map of the Parish of Coleshill in the County of Berks 1841; Roque's Map of Berkshire 1761.

Confidence level 2

### **FPM 26 South Mead, Coleshill**

FPM 26 is located to the south of Coleshill and was recorded on the tithe as Plot 267 Southern Mead. The lidar data reveals a medieval open field with furlongs where the terrain rises out of the floodplain, with furlongs clearly visible in the lidar data. These open fields follow the contour of the floodplain and respect the edge of the FPM. There is no clear entrance to the FPM and the 1811 OS drawing for Wantage shows this whole area as being part of Coleshill Park; it seems likely that landscaping of this area has removed the route to the meadow. There is a trackway on this map that crosses Coleshill Park, passing the edge of the meadow before it continues across the River Cole to Strattonborough Castle (Figure 48, Droveaway 21). This trackway is not mapped on Rocque's map of 1761.

Source: Map of the Parish of Coleshill in the County of Berks 1841.

Extent: 25.71 acres, this FPM covers 8.13% of the floodplain.

Confidence Level: 3

### **FPM 33 Broadmeadow, Lords Meadow and Duddleston Mead, Colehill**

FPM 33 Broadmeadow, Lords Meadow and Duddleston Mead is in an area of Coleshill Parish which is detached from the main area of the parish, opposite Upper Inglesham. Three plots with meadow related names were identified from the tithe map and tithe apportionment records. They comprise Broadmeadow (plot 301), Lords Meadow (plot 310) and Duddlestone Mead (plots 312 and 313). The River Cole forms the east boundary for the FPM while to the west, the lidar data shows open fields with furlongs respecting the boundary of the FPM, suggesting that the two are probably contemporaneous. Bedwork channels can be seen in the lidar data across Broadmeadow.

Source: Map of the Parish of Coleshill in the County of Berks 1841.

Extent: 65.29 acres; this FPM covers 20.65% of the floodplain.



## 6. Discussion

### 6.1. Domesday Settlements and Meadows: Dorset Stour

The Domesday survey undertaken in 1086 provides a valuable source of information regarding land use, ownership and population within each parish at this particular point in the medieval period. Domesday was not a comprehensive survey: it is known that not all settlements or farmsteads were included so although it is a very useful resource, it was by no means complete (Darby, 1986, pp. 13–14). For the purpose of this study, it provides comparable information for each settlement including the area of meadow in acres, and the size of the population in households: the absolute sizes that these figures represent is less important than that they are available consistently for each recorded settlement.

Domesday refers to 'land susceptible to flooding as it was next to water'<sup>49</sup> as meadow, while Darby (1986, p. 137) notes that pasture was 'land available for grazing all year round'. This appears to represent a clear distinction between different types of land use at the time of the survey. Meadows were recorded in acres in Domesday but there is ambiguity as to whether this measurement refers to the fiscal value of the land (its taxable value) or to its physical area<sup>50</sup>. Even if taken to mean a physical area, the measurement of an acre in Domesday is also fraught with problems: an acre was said to measure 4x40 perches but a perch could be anywhere between 14 to 28 feet in length, depending on soil type and other factors. Therefore, although the acreage of meadow recorded in Domesday has been compared to the total acreage of potential FPMs in this study, the relationship between a Domesday acre and of a modern acre is best thought of in terms of proportions rather than absolute values.

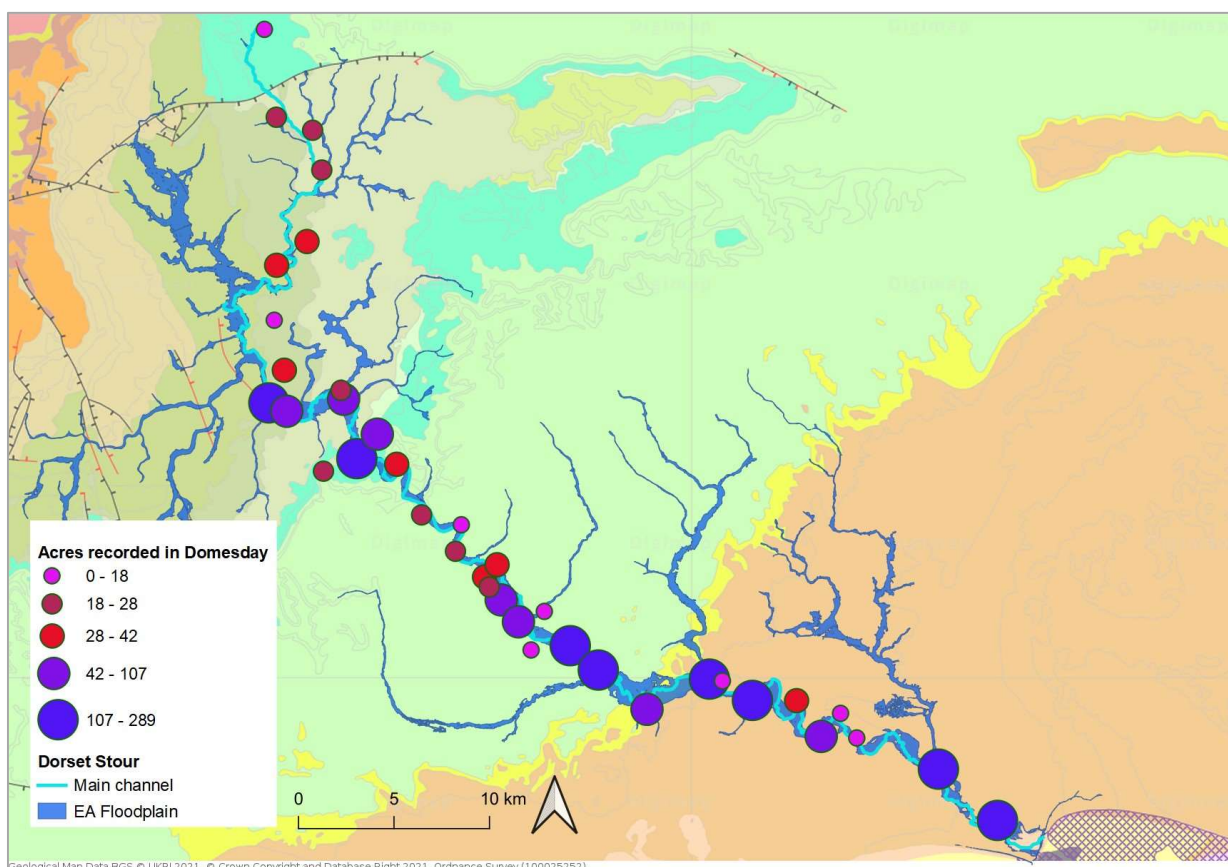


Figure 49 Meadow acreage along the Dorset Stour as recorded in Domesday. Shown against bedrock geology – DiGMapGB-250 Rock Units ((1:250 000) Rock Unit).

<sup>49</sup> <https://www.nationalarchives.gov.uk/domesday/world-of-domesday/landscape.htm>.

<sup>50</sup> <http://www.domesdaybook.net/domesday-book/data-terminology/taxation/acre>.



When plotted in GIS, the distribution and size of the meadows recorded in Domesday varies along the route of the Stour. Unsurprisingly, in the upper reaches of the river, the acre value of meadow is much smaller than in the lower reaches. When mapped over the bedrock<sup>51</sup>, there appears to be a partial correlation with the bedrock geology: where the underlying geology of a settlement is predominately chalk, the Domesday acreages are smaller; while the Domesday acreage of meadow is greater where the geology underlying the settlement are clays and greensand (Figure 49). The key factor here appears to be that the chalk constrains the floodplain: where the Stour crosses the chalk to the north of Blandford, the floodplain is narrow and the Domesday acreage of meadow is correspondingly small; to the south of Blandford the floodplain broadens and the Domesday acreage of meadow increases to a degree, but only approaches the larger values seen upstream once it leaves the chalk entirely near Wimborne.

A similar pattern was found when examining the distribution of the number of households recorded for each settlement against the geology. Settlements with smaller numbers of households fell within the same geological areas as those settlements with small acreage of meadows. Settlements with a smaller number of households are generally located in the area north of Blandford where the geology is chalk, and in the upper reaches (

Figure 50).

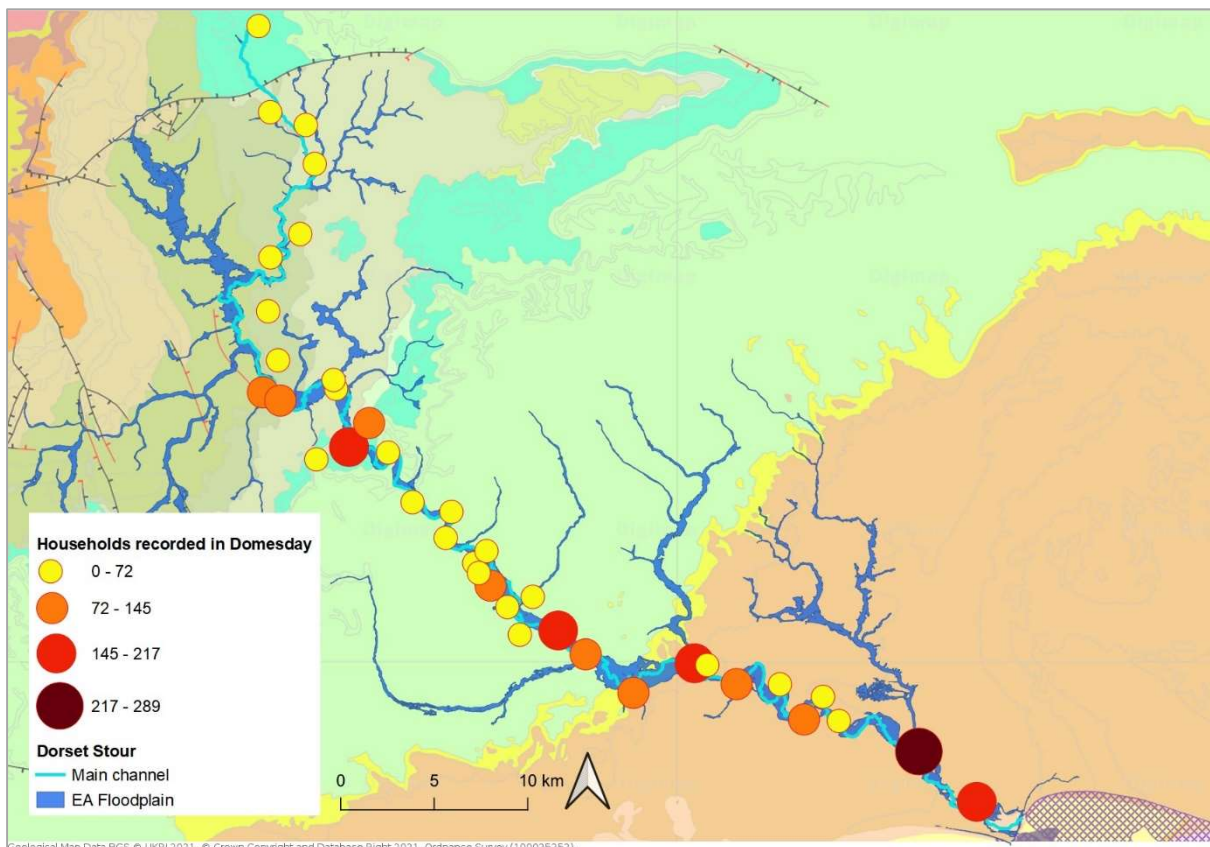


Figure 50 Settlements recorded in Domesday along the Dorset Stour, number of households. With Environment Agency Floodplain in the background.

The coincidence of both the Domesday acreage of meadow and the number of households with the chalk geology suggests a correlation between acreage of meadow and number of households, where the breadth of the floodplain (resulting from the underlying geology) may be a determining factor. The apparent relationship between the size of settlement and the acreage of flood meadow (i.e. more households require more acres of meadow) seems to be supported by plotting the

<sup>51</sup> Geological Survey Map DiGMapGB-250 Rock Units ((1:250 000) Rock Unit).

number of households against the number of acres in a scatterplot and examining the fit of the regression line (Figure 51).

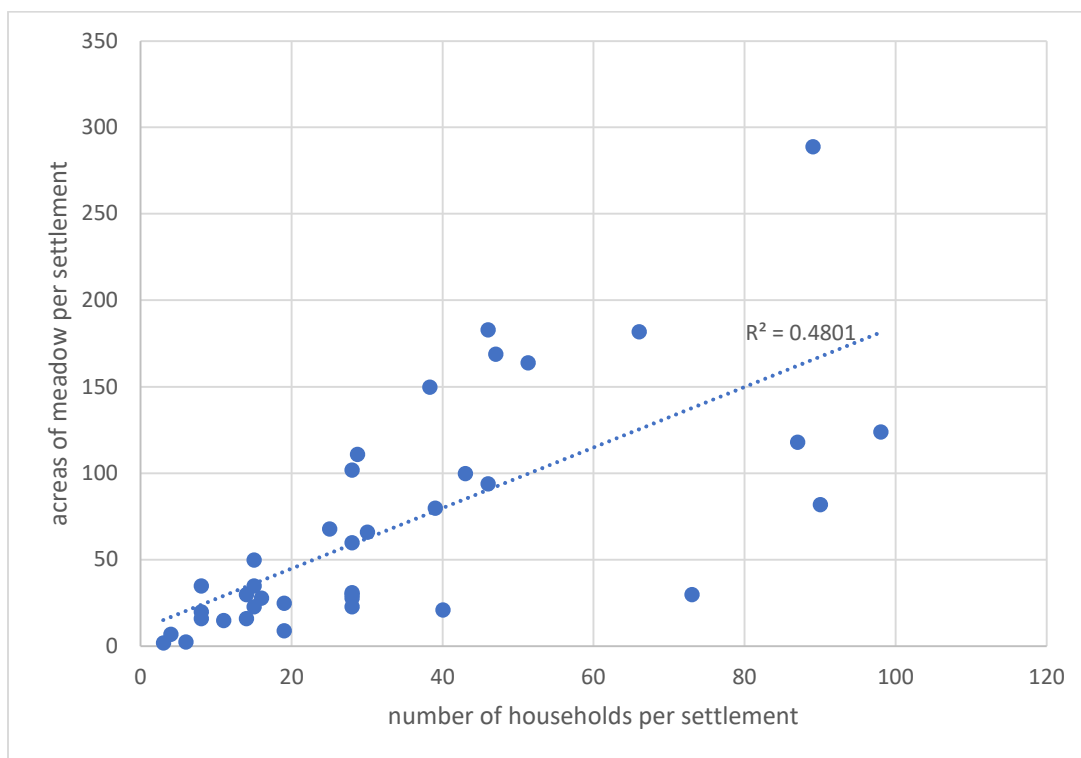


Figure 51 Scatterplot showing the relationship between number of households and size of acreage recorded in Domesday (Dorset Stour).

Although this is a small sample, the result shows a moderate relationship between the number of households and the number of acres of meadow for each settlement, such that in 48% of cases there will be a correlation between the area of meadow and the number of households in a settlement. This result may suggest that the scope for settlements to grow is influenced by the acreage of meadow, keeping in mind that this acreage may refer to taxable value rather than area. The results may be skewed by a few settlements where the meadow acreage recorded in Domesday represents more than one settlement, which is why some points lie away from the regression line.

The table below summarises the acreage of FPMs identified in this study (FPM acre) alongside the acreage of meadow recorded in Domesday (Domesday Meadow Acres) for each settlement in the Dorset Stour study area.

Settlement	Parish	Parish Acre	Parish in floodplain acre	% of parish in floodplain	FPM acre	% of parish that is FPM	Domesday Meadows acres
Colber	Sturminster Newton	4547.9	742.0	16.3	42.8	0.9	111
Bagber	Sturminster Newton	4547.9	742.0	16.3	125.2	2.8	none recorded
Newton	Sturminster Newton	4547.9	742.0	16.3	155.9	3.4	82
Hinton St. Mary	Hinton St Mary	1070.3	102.2	9.6	166.6	16	30
Manston	Manston	1374.4	287.7	20.9	30.7	2.2	25
Hammoon	Hammoon	693.2	392.2	56.6	190.8	28	50
Okeford Fitzpaine	Okeford Fitzpaine	3742.6	104.1	2.8	50.7	1.4	21
Child Okeford	Child Okeford	1604.2	193.7	12.1	211.9	13.1	80
Shillingstone	Shillingstone	2272.9	306.9	13.5	144.9	6.4	183

Settlement	Parish	Parish Acre	Parish in floodplain acre	% of parish in floodplain	FPM acre	% of parish that is FPM	Domesday Meadows acres
Total study area		15305.5	2128.8	13.9	851.7	5.5	582

Table 3 Summary results for each settlement: Dorset Stour.

Figure 52 shows the relative proportions of the FPMs found against those recorded in Domesday together with the amount of the modern floodplain within in each parish.

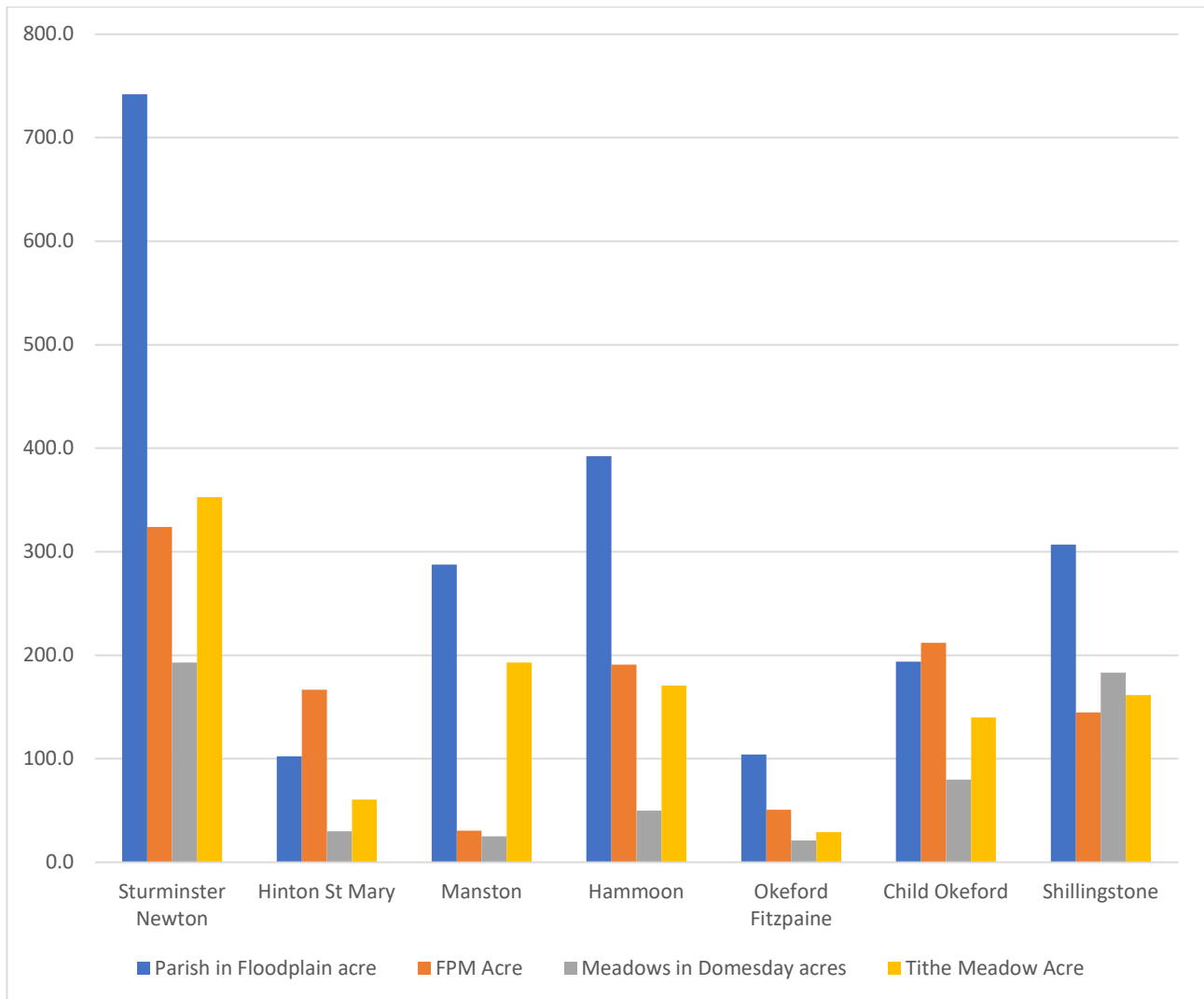


Figure 52 Relative proportions of FPM acres, Domesday meadow acres and the total acreage of tithe plots where the cultivation type was 'meadow' within the floodplain of the parish. Note: Sturminster Newton is made up of the three settlements: Colber, Bagber (not recorded in Domesday) and Newton, while the remaining parishes each had a single settlement recorded in Domesday.

As noted above, it is the proportions rather than the absolute values that are considered most important here, given that the meaning and extent of a Domesday acre is open to interpretation. Nevertheless, the acreage of FPMs identified in this study is proportionate to meadows recorded in Domesday in Manston and Shillingstone. At Hinton St. Mary, Okeford Fitzpaine, Child Okeford, Hammoon and Sturminster Newton there are significant differences in proportions, which may reflect several factors:

- inconsistencies within the Domesday record, notably where multiple places are recorded together as one settlement while some settlements are not recorded at all.

- Settlements increasing in size during as a result of population expansion after the Domesday survey, which may have resulted in the development of new common meadows; which may subsequently have been lost when the population declined severely in the fourteenth century.
- Alterations of boundaries and settlements changing over time.

The results also indicate that in most parishes the area of floodplain is far greater than the area of identified FPMs. The values for Colber, Bagber and Newton may be slightly misleading as all three settlements – each with FPMs – are within Sturminster Newton parish; but even when combined neither the FPMs nor Domesday acreage are as extensive as the modern floodplain. With the exception only of Child Okeford, the area of available floodplain far exceeds the FPMs for which there is historic evidence.

## 6.2. Domesday Settlements and Meadows: Thames Tributaries

The Domesday data for the Thames, Cole and Windrush was collated using Open Domesday with the same variables – household size and meadow size – as were recorded for the Dorset Stour. However, data relating to number of households and the size of meadow was only available for nine of the 16 settlements within the parishes studied along the Thames, Cole and Windrush.

As the consideration of this question on the Stour had drawn on settlements along the entire river, it was decided to add the settlements on the opposite side of the Thames, Cole and Windrush that were not within the study parishes but that were recorded in Domesday. This increased the sample size for the Domesday database for the Thames, Cole and Windrush, which can be summarised as follows:

- 16 settlements were identified within the chosen parishes along the Thames, Cole and Windrush:

*Thames*     *Aston and Cote, Bampton, Chimney, Clanfield, Grafton, Lechlade, Kelmscott, Shifford, Radcot, and Weald*

*Cole*        *Coleshill, Highworth, Inglesham*

*Windrush*   *Brighthampton, Ducklington, Standlake*

- 9 settlements in chosen parishes were recorded in Domesday:

*Thames*     *Bampton, Clanfield, Grafton, Lechlade, Shifford, and Weald*

*Cole*        *Highworth, Coleshill*

*Windrush*   *Brighthampton, Ducklington*

- 6 settlements were not in Domesday but were known to host medieval settlements:

*Thames*     *Kelmscott, Chimney, Radcot, Aston and Cote*

*Cole*        *Inglesham; Windrush:*

*Windrush*   *Standlake*

- 1 settlement was recorded in Domesday, but meadow was not recorded in acres:

*Thames*      *Lechlade*

- 12 additional settlements were recorded along the southern side of the Thames and eastern side of the Cole and Windrush that were mentioned in Domesday:

*Thames*      *Buckland, Carswell, Draycott Moor, Duxford, Eaton Hastings, Hinton Waldrist, Littleworth, Longworth*

*Cole*          *Buscot*

*Windrush*    *Stanton Harcourt, Witney and Cogges*

The distribution of the meadows recorded in Domesday is illustrated in Figure 53. Little can be said about either the Cole or the Windrush as only small stretches of these rivers were examined and there are too few settlements on these rivers to indicate any spatial patterns. The study on the Thames reveals that meadows on the southern side appear to fall within the largest range of 104 to 339 acre size, whereas those to the north of the river fall mainly within the two groups of 22 to 61 acres and 61 to 104 acres ranges.

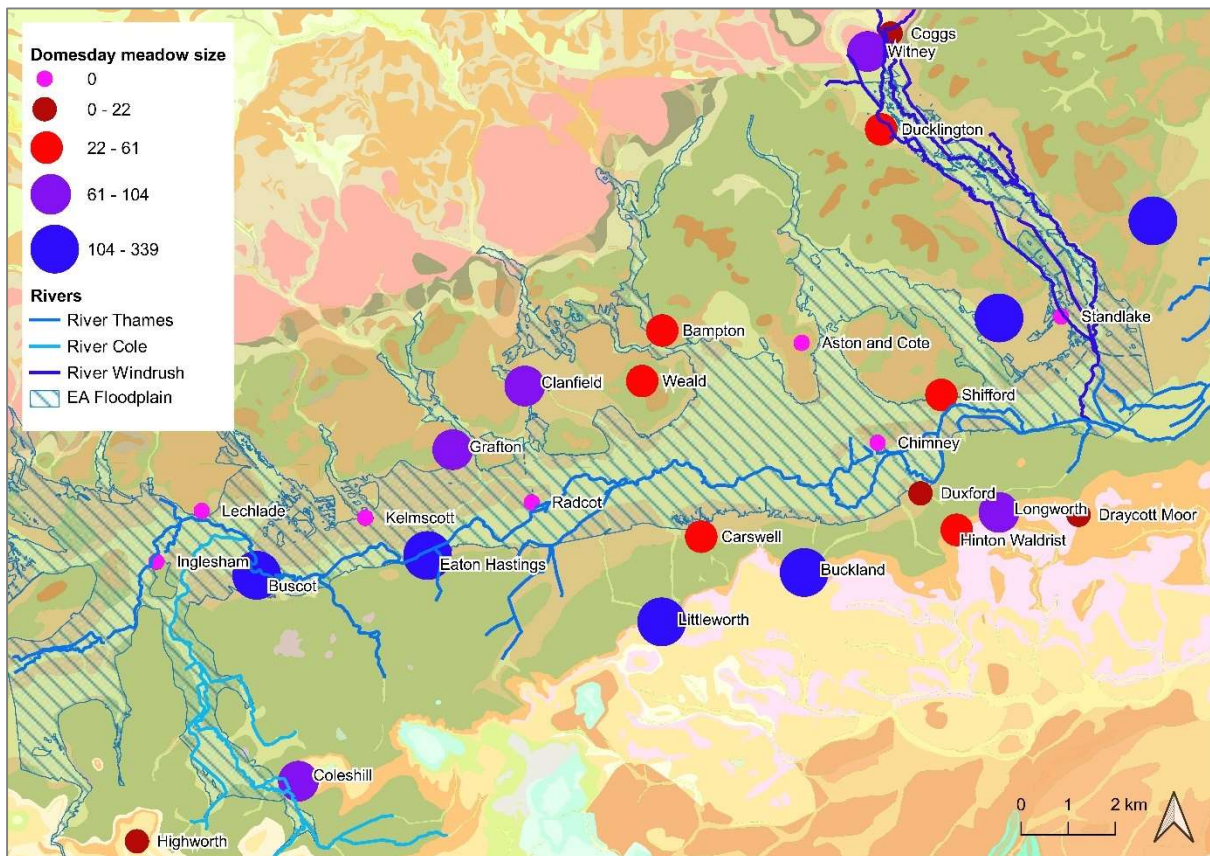


Figure 53 Meadow acreage along the Thames, Cole and Windrush as recorded in Domesday shown against bedrock geology DigiMapGB-50 Rock Unit ((1:50 000) Rock Unit)



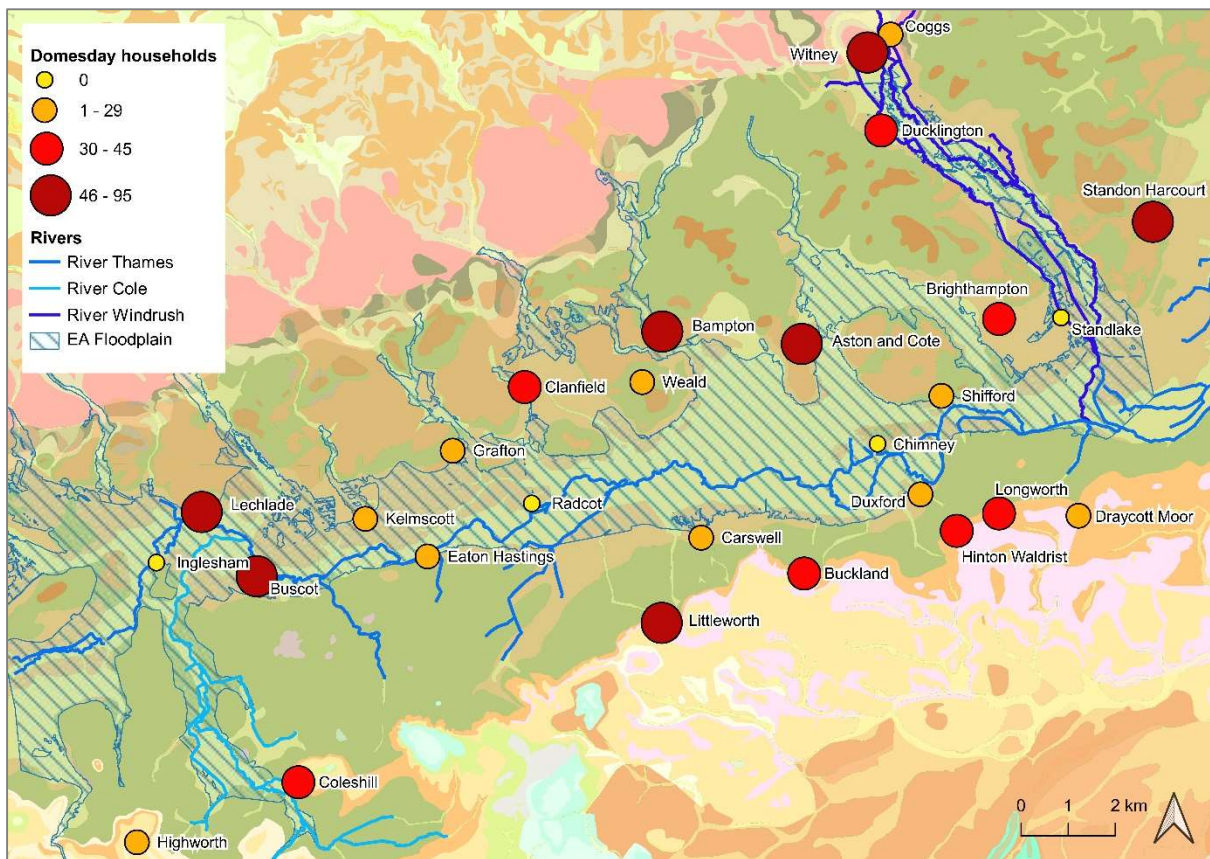


Figure 54 Settlements recorded in Domesday along the Thames, Cole and Windrush, number of households. With Environment Agency Floodplain and GBR BGS 1:50k superficial deposits and bedrock in the background.

Figure 54 shows the settlements along the Thames, Cole and Windrush with the number of households recorded in Domesday. Most of the larger settlements appear to be set just outside of the edge of the floodplain (blue hashed area) on sand and gravels or Oxford clays, while the settlements that were not recorded in Domesday (Inglesham, Radcot, Chimney and Standlake) were mostly<sup>52</sup> sited within the floodplain on alluvium. Like the FPMs. The settlements adjacent to the river that were not recorded in Domesday became shrunken medieval settlements and are now the small hamlets seen today. Their location next to the river would have made them susceptible to continual flooding events which may have ultimately led to their contraction.

Plotting the number of households against the size of meadow along the Thames, Cole and Windrush reflects a similar result to that found on the Dorset Stour (Figure 55). The scatterplot illustrates a positive regression line, indicating that as the number of households increases, so does the meadow size. The value of  $R^2$  for the Thames, Cole and Windrush is 0.3574, meaning the strength of the relationship between the number of households and the meadow acreage is low to weak. That is to say that 30% of the variance of the dependant data (meadow acreage) is explained by the variance of the independent variable (number of households).

<sup>52</sup> Standlake is only just outside the floodplain.

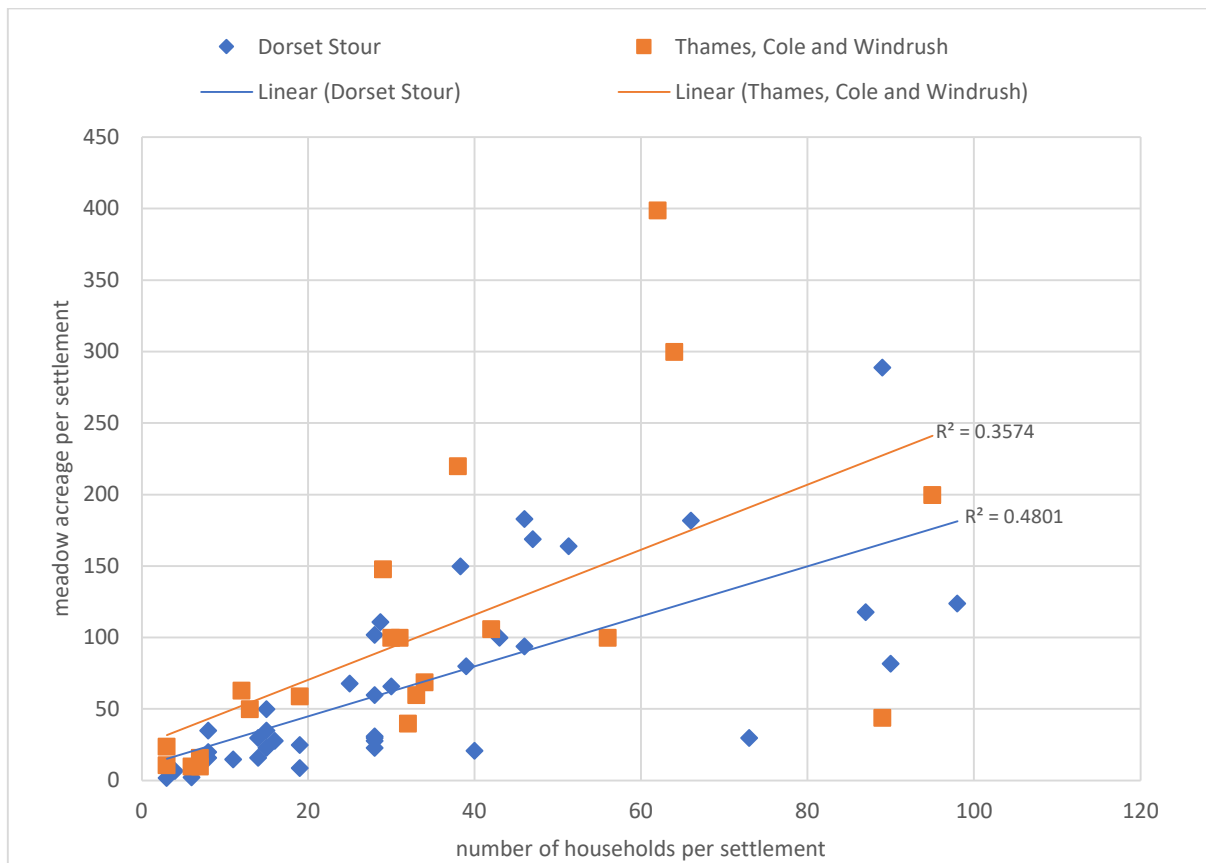


Figure 55 Scatterplot showing meadow acreage and number of households per settlement on the Dorset Stour compared to the Thames, Cole and Windrush.

This result is lower than that that obtained from plotting the settlement and meadow size from the Domesday data for the Dorset Stour, where the value of  $R^2$  is 0.48, meaning 48% of the variance of the meadow size is explained by the variance of household size.

The explanation for the lower  $R^2$  value on the Thames tributaries could be due to several factors, including a lower sample size along the Thames, Cole and Windrush compared to the Dorset Stour. On the Dorset Stour, most of the settlements near the river were recorded in Domesday compared to the stretch along the Thames, where fewer settlements were recorded in Domesday. The sample size of the Dorset Stour included settlements along the entire length of the river; not just the parishes where FPMs were being identified. Initially it was thought that if all the settlements in the Thames study area were sampled, this would provide enough information for comparison with the Stour, until it was discovered that many settlements were not recorded in Domesday, or that the settlements themselves were recorded as being part of other settlements such as at Radcot where the settlement is thought to be included with Langford. Kelmscott is another example of a settlement that was not recorded separately in Domesday, being an outlier of Broadwell Manor. However, the number of households for this settlement in 1279 was obtained from the VCH<sup>53</sup>. Figures for households were also derived from the VCH for Aston and Cote<sup>54</sup>.

Lechlade was recorded in Domesday, but while household size was recorded, the meadow was recorded by value rather than by acreage. Terret and Darby (1971, p. 32) suggest that the value documented implies Lechlade had a sizeable meadow acreage even though the acreage was not measured in Domesday.

<sup>53</sup> <https://www.british-history.ac.uk/vch/oxon/vol17/pp111-145>.

<sup>54</sup> <https://www.british-history.ac.uk/vch/oxon/vol13/pp62-66>.

Whilst it is known that not all settlements were recorded in Domesday, the reason for the cluster along this stretch of the Thames is not clear. All the settlements along this stretch have evidence of medieval and earlier occupation.

The two datasets for the Stour and Thames tributaries were combined, to see if improving the sample size would strengthen the relationship between the two variables, which is illustrated in Figure 56.

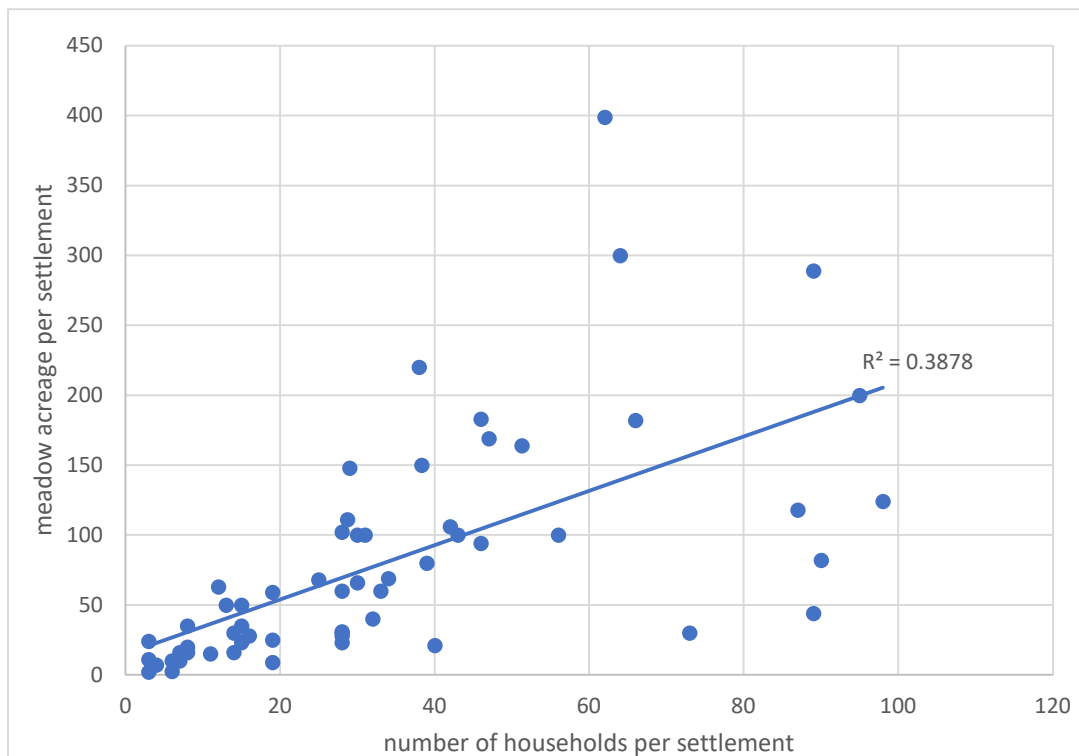


Figure 56 Scatterplot showing meadow acreage and number of households per settlement for the Dorset Stour and the Thames, Cole and Windrush combined.

The combination of the two datasets resulted in an  $R^2$  value of 0.3878 (38% of the variance of the meadow size is explained by the variance of household size). This is still only a moderate correlation.

Applying statistical methods to a dataset that was collated nearly a thousand years ago is not going to be without its problems. It is well known that the Domesday data has inconsistencies, but even taking this into account it does provide a remarkable way of looking at the relationship between variables at that point in time. Bearing this in mind, the results of the scatterplots – both individual plots for each study area and the plot for the study areas combined – suggest there is a relationship between the number of households in a settlement and the acres of meadow; albeit a moderate to low one. Adding to the sample size by including details of further settlements recorded in Domesday from the Thames and its tributaries might be a productive way forward.

The table below summarises the acreage of FPMs identified in this study (FPM acre) alongside the acreage of meadow recorded in Domesday for each settlement in the Thames tributaries study area.

Settlement	Parish	Parish Acre	Parish in Floodplain acre	% of parish in floodplain	FPM Acre	% of parish that is FPM	Domesday Meadows acres
Aston	Aston Shifford Chimney	4442.2	2565.2	57.7	465.5	10	no recorded
Bampton	Bampton	4524.5	1865.7	41.2	26.2	1	44
Brighthampton	Standlake	2604.1	1365.0	52.4	85.0	3	106

Settlement	Parish	Parish Acre	Parish in Floodplain acre	% of parish in floodplain	FPM Acre	% of parish that is FPM	Domesday Meadows acres
Chimney	Aston Shifford Chimney	4442.2	2565.2	57.7	413.9	9	no recorded
Clanfield	Clanfield	1797.7	605.2	33.7	253.5	14	100
Coleshill	Coleshill	2334.4	316.10	13.5	246.6	10	no recorded
Ducklington	Ducklington	1954.5	242.7	12.4	174.4	9	69
Grafton	Grafton	1065.8	831.3	78.0	141.3	13	60
Highworth	Highworth	6369.8	817.9	12.8	220.7	3	10
Inglesham	Inglesham	1241.9	672.7	54.2	205.0	17	no recorded
kelmscott	Kelmscott	1035.6	878.7	84.8	145.3	14	no recorded
Lechlade	Lechlade	4010.0	1957.7	48.8	526.8	13	no recorded
Radcot	Grafton	1065.8	831.3	78.0	70.6	7	no recorded
Shifford	Aston Shifford Chimney	4442.2	2565.2	57.7	95.0	2	50
Standlake	Standlake	2604.1	1365.0	52.4	413.0	16	no recorded
Weald	Bampton	4524.5	1865.7	41.2	190.1	4	24
Total study area		48243.1	20438.5	42	3672.8	8	

Table 4 Summary results for each settlement: Thames.

Figure 57 shows the relative proportions of the FPMs found against those recorded in Domesday, together with the amount of modern floodplain within each parish.

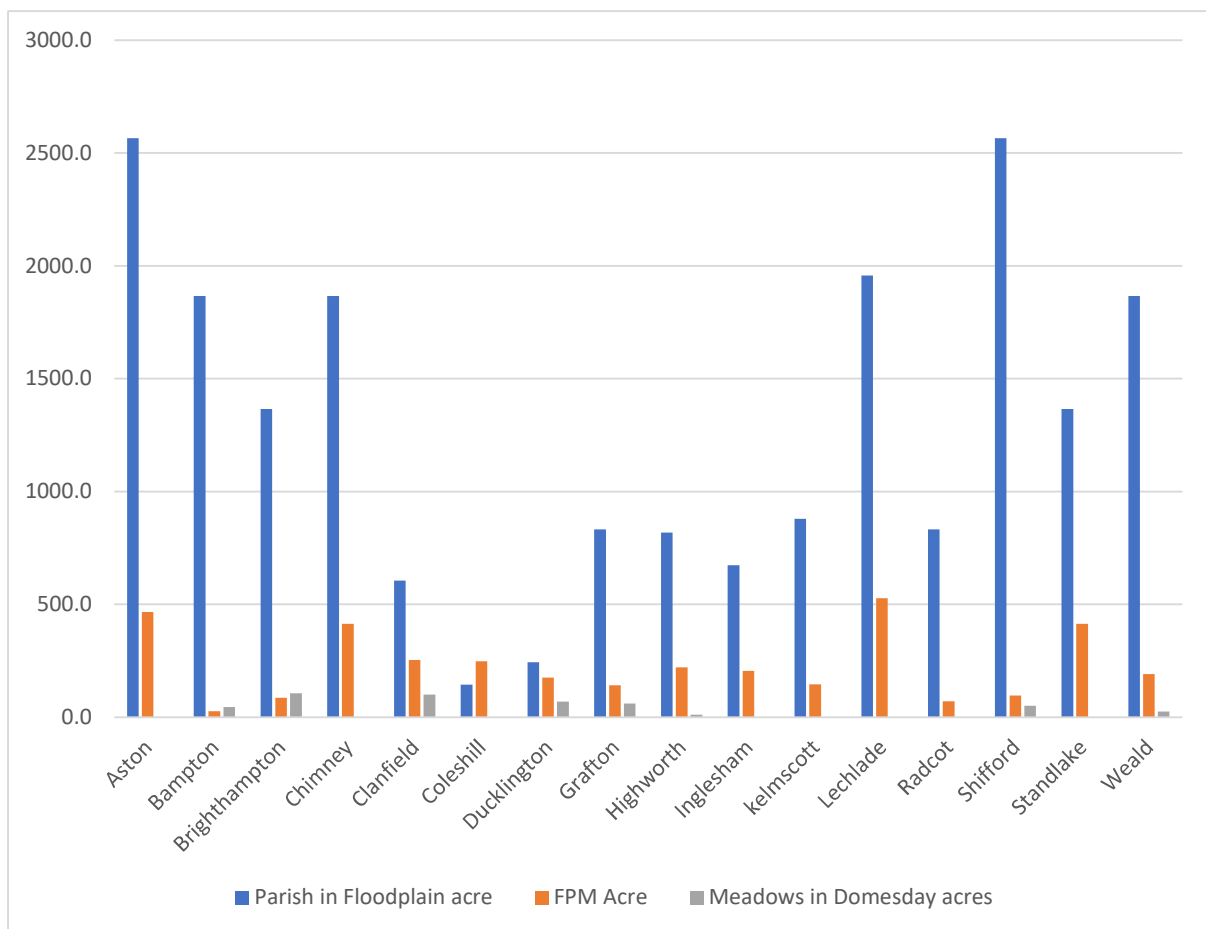


Figure 57 Relative proportions of Parishes acres, FPM acres, Domesday meadow acres

Due to the ambiguous extent of a Domesday acre, the acreage data from the Thames, Cole and Windrush needs to be considered proportionally, as it was on the Dorset Stour. The results show that the proportion of parish lying within the modern floodplain along these rivers is noticeably higher than in the modern floodplain of the Dorset Stour, which suggests there is potential for more meadow. Indeed, comparison of FPMs from the Dorset Stour and the Thames, Cole and Windrush show that the extent of FPMs identified on the Thames tributaries is generally greater than on the Dorset Stour (Figure 58). However, the FPMs in the Thames tributaries occupy a smaller proportion of the floodplain than on the Stour; the proportion of meadow recorded in Domesday relative to the floodplain is even less. This might suggest that the availability of floodplain far exceeded the need for floodplain meadows in the Thames tributaries study area.

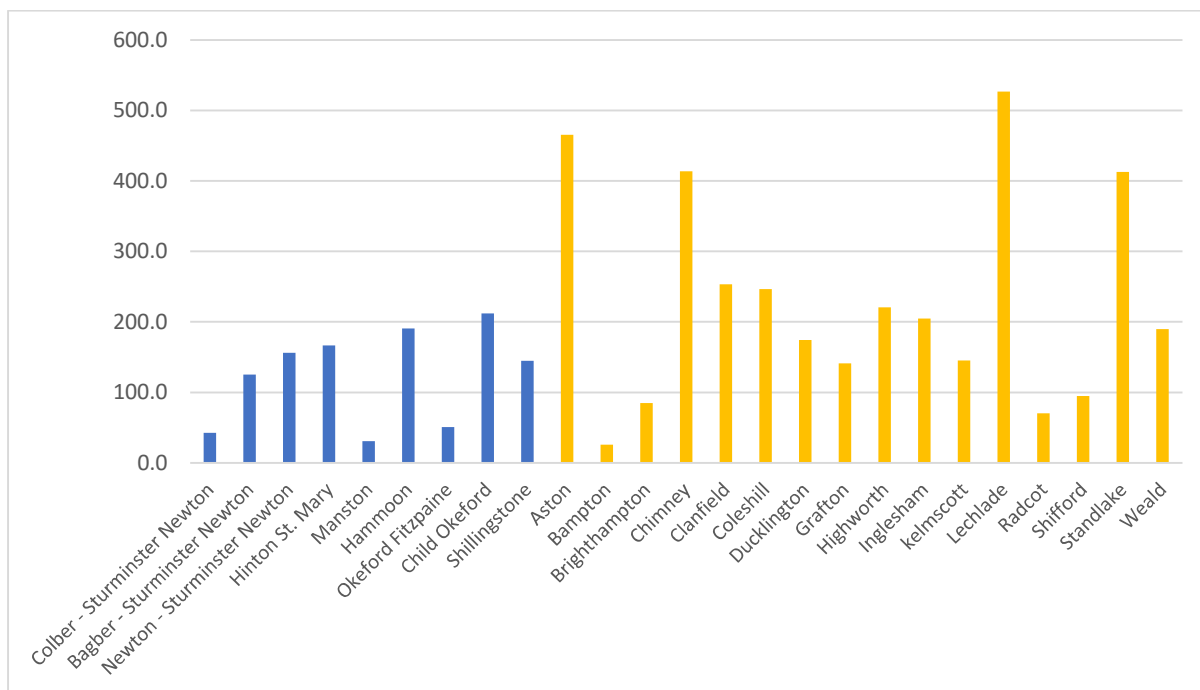


Figure 58 Comparison of size of FPMs on the Dorset Stour to the Thames, Cole and Windrush

Most of the FPMs identified on the Thames, Cole and Windrush were significantly larger than the meadows recorded in Domesday. Leaving aside the ambiguity in the relationship between Domesday acres and modern acres, an increase in extent might be due to populations, settlement sizes and consequently their meadows expanding after Domesday – a pattern also indicated on the Dorset Stour.

### 6.3. Floodplain Meadow and their Droveways

Access from settlements forms a key part of the identification of FPMs using this methodology. In all those meadows identified during the initial Dorset Stour project, one of the significant features was the presence of a funnel-shaped entrance that opens from a driveway leading from the settlement. As the best meadows are found in the floodplain, and settlements are generally situated beyond the floodplain, then the daily functioning of FPMs – especially aftermath grazing – requires an access route.

One of the best examples of the relationship between FPMs and the routes around a settlement is FPM 21 Net Mead, in the parish of Child Okeford (Figure 59). The floodplain meadow is situated at the end of Net Mead Lane, which is marked on all the map sources. There is a second lane to the south of this, called Greenway Lane, but this lane is not shown on the 1808 OS drawing so appears to be later; it may be associated with access to an orchard in the southernmost part of Net



Mead shown on the Epoch 1 25" OS in the later part of the 19<sup>th</sup> century. Nonetheless, Child Okeford provides a good illustration of the network of routes between the settlement and commons in the floodplains and elsewhere in the parish (Figure 59).

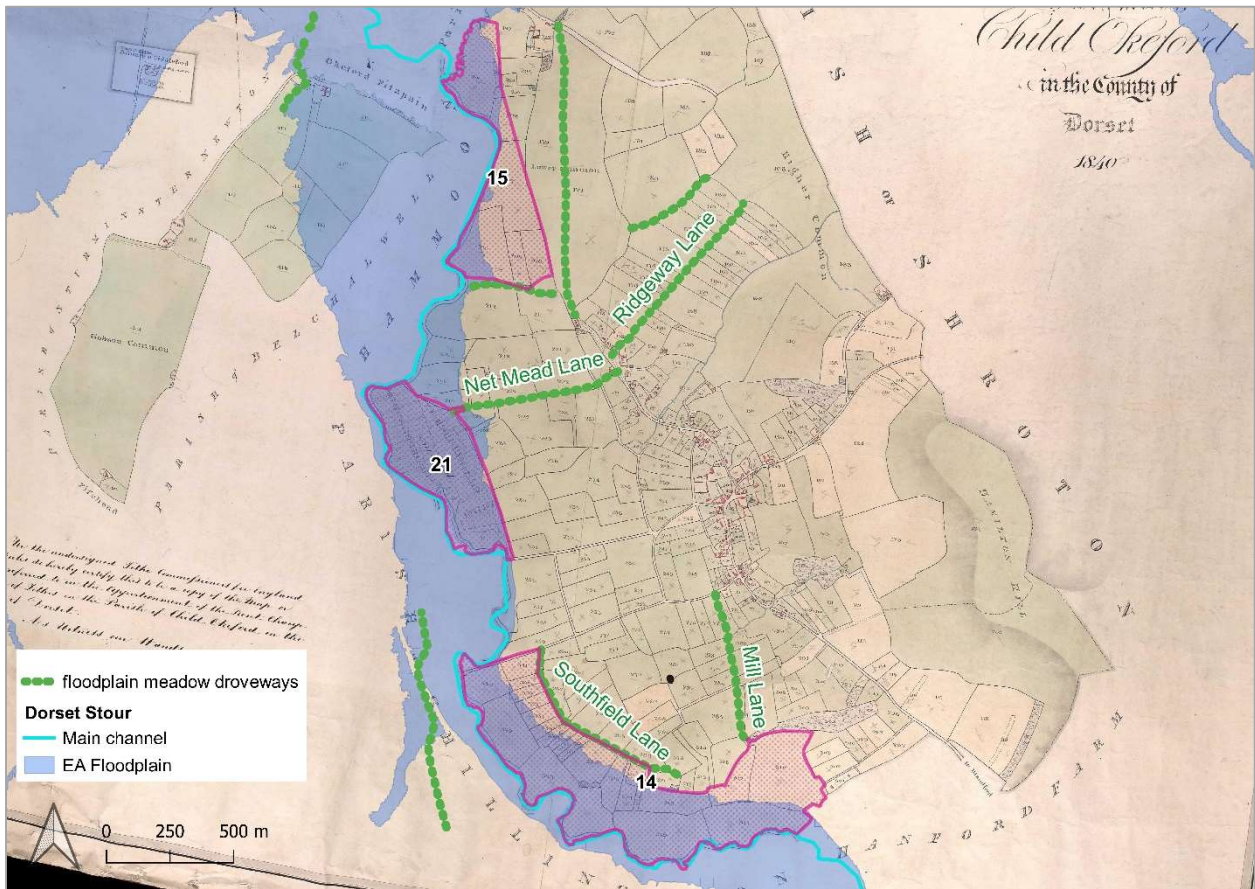


Figure 59 FPMs at Child Okeford, showing FPMs and droveways.

## 7. Conclusion

This study has developed and demonstrated a methodology for identifying historic floodplain meadows using a range of mapped sources. The methodology built upon and refined the more general methodology used for the *Historic Watercourses: Dorset Stour* project, identifying additional FPMs and clarifying the extent of those identified previously.

The methods applied to the Dorset Stour were successful on the three rivers of the Windrush, Thames and Cole. The study of the Thames tributaries confirms that FPMs can be identified using historic sources in the same way as they were found on the Dorset Stour. In the absence of comprehensive coverage by tithe maps and apportionments, other sources provided suitable evidence to enable identification of FPMs.

The methodology confirms the persistence into nineteenth century mapping of a distinctive form of floodplain meadow with clear and quite consistent morphological features. Sufficient of these are shown subdivided into doles in tithe maps in the 1840s to indicate that their general form of management comprised allocation of strips to individuals for hay followed by grazing of the aftermath. The need to move animals to and from the floodplain meadows as commons gave rise to their funnel-shaped entrances accessed via droves that connect to the settlement; the importance of these droves and common floodplain meadows caused them to be maintained while surrounding land was enclosed.

By themselves, the extent of the modern floodplain, the recording of 'meadow' as the state of cultivation in tithe maps, or even the use of 'mead' and other related field names are not robust indicators of the presence or extent of floodplain meadows as identified by this study. However, the term 'ham' is closely associated with the floodplain.

The project has identified floodplain meadows within the floodplain of each parish using GIS; the GIS enables the area of the identified FPM to be compared with the modern area of the floodplain. Generally, among the parishes examined, the area of FPM is very much less than the area of floodplain, suggesting that only a moderate proportion of the available floodplain was either suitable or required as FPM.

The approach has shown that each parish had at least one FPM and some parishes had several; though this may reflect the presence of multiple settlements within a modern parish, some of which may not have survived to the modern period. Broadly, it appears that each settlement or parish had its own share of floodplain; this impression is reinforced by the presence of droveways connecting FPMs to settlements. The close relationship between FPMs managed as commons, their settlements, and the droveways that connected them has been highly apparent throughout this project.

There appears to be a relationship between the size of population (recorded as number of households) and the extent of meadow (in acres) recorded in the Domesday survey, where meadow is understood to mean only 'land susceptible to flooding as it was next to water'. Moreover, the proportion of meadow recorded in Domesday from settlement to settlement among those selected here is – in some instances – in close proportion to the area of FPM that has been identified. It might be tentatively suggested that there seems to be a correlation between the FPMs identified in this study – and hence the features used to identify them – and the landscape of the Dorset Stour in 1086. There appears also to be a relationship between the geology of the Dorset Stour, the acreage of meadow and number of households recorded in Domesday, which may be attributable to the way that the geology constrains the floodplain.

Looking at the Thames tributaries study area, comparison of the Domesday data for meadows with the identified FPMs suggests that meadows increased in size after 1086, perhaps reflecting the increase in medieval population prior to its decline in the fourteenth century. There are, however, examples where meadows do not appear to have varied much between their extents in the medieval period and the 19<sup>th</sup> century, which may reflect constraints on the floodplain acting as a

limiting factor. As on the Stour, it was found there is a relationship between the number of households and the size of meadows recorded in Domesday. The relationship may not be a particularly strong one, but warrants further exploration.

Several avenues for further work are suggested by the project, which can be outlined as follows:

- Extending the same approach to the whole breadth of the floodplain within the study area of the Thames tributaries, to include parishes that encompass areas of the modern floodplain north of the north bank parishes examined here; and the parishes south of the Thames. This would capture the potential for FPMs on minor tributaries as well as providing a more comprehensive understanding of the relationship between settlements and FPMs as recorded in Domesday. Extending the study in this way is likely to encounter variable coverage in terms of tithe mapping, though this can be mitigated by interpreting across multiple sources, and acknowledged through confidence scoring the resulting FPMs.
- Reviewing the current condition of FPMs identified in the Dorset Stour and Thames tributaries study areas, with reference to habitat and landuse mapping, and satellite data (Google). If warranted by results and circumstances allow, desk-based review could be used to target field visits. Such a review would enable assessment of the presence and character of surviving features – such as boundaries, access routes and patches of ancient habitat – that could be important to restoration.
- Exploring the extent of meadow in the floodplain beyond the FPMs identified by this study. The methodology developed here identifies only the meadows that have left a persistent trace in the landscape because their form reflects their being managed in common over a long period. Point in time information from estate maps and from tithe maps and apportionments could be used to map parts of the floodplain likely to have been cultivated by private landowners as meadow outside FPMs in the eighteenth and nineteenth century.
- Incorporating identified FPMs into opportunity maps for floodplain meadow restoration to complement opportunity maps based on, for example, present day environmental factors.
- Extending the examination of relationships between meadows, households and other indices recorded in Domesday. The tentative relationships between meadow acreage and households noted here could be addressed with larger sample sizes and from a range of catchments.
- Carrying out historical research to marry the FPMs mapped by this project on Dorset Stour and Thames tributaries with documentary sources and, potentially, further historic map evidence, such as estate maps. It is likely that the resource of mapped and named FPMs created by this project could be used to elicit a richer understanding of documentary material.
- Carrying out palaeo-environmental investigation of FPMs identified by this project, to address how the environment changed over time at these locations – especially their origins prior to Domesday and their potential antecedents in Roman, Iron Age or even Bronze Age periods. Such investigations can be factored-in to interventions in the floodplain such as construction of infrastructure or flood defences, or the delivery of nature-based solutions such as the excavation of scrapes (as occurred as part of the National Trust's Green Recovery Challenge Fund (GRCF) project at Killerton).
- Using the experience of the project here – and any of the further work outlined above – in public outreach: both in terms of results and methods applied. There is considerable scope for developing outreach materials, workshops, and toolkits for community groups.
- Emphasising the human, historical dimension of FPMs in the policy sphere, underlining their character as resulting from the interaction of both natural and human factors. The historical origins of FPMs are highly relevant to questions of community engagement with

local landscapes, volunteering, co-management, and greater access. Community engagement and access are not simply desirable for the future of FPMs: they were fundamental to the character and quality of these valuable features over many centuries.

The project has shown that floodplain meadows once managed as commons persist in the landscape even where they are previously unrecorded. In some cases, their form and topographic features survive, even if the habitat has been extinguished by improvement or intensive agriculture. Where they don't survive physically, the presence of floodplain meadows can be traced in historic maps, documents, and archive data. However, old maps don't speak for themselves: by the time the first detailed, precise, and widely available maps were made – notably tithe maps in the mid-nineteenth century and large-scale OS maps in the late nineteenth century – floodplain meadows had already disappeared in some places due to enclosure or other encroachment. In these cases, identification of former floodplain meadows requires interpretation based on multiple sources, though caution is also required about the weight placed upon a few maps and geographical accounts given a history of floodplain meadows stretching over a millennium, if not longer.

Notwithstanding, there are sufficient sources for the earlier extent of floodplain meadows to be mapped in many catchments. The approach offers a robust and transparent method for evidencing the former presence and extent of floodplain meadows locally and regionally. This offers a way of quantifying loss and rarity; but it is also a way of flagging potential sites for restoration, especially where their physical features still survive. The method also provides a means of directly integrating restorable meadows into catchment management alongside other opportunities for nature-based solutions.

The project has shown, however, that floodplain meadows are not just physical things: they are the embodiment of cultural practices carried out by communities over many generations. They combine both tangible and intangible heritage. This character is underlined by their demonstrable relationship with the parishes and settlements that gave rise to them, and the droves that were key to their accessibility and gave them their distinctive form.

The results of this project support the view that floodplain meadows were both widespread and central to the organisation of the rural economy for at least a thousand years. Common governance, co-creation and public access were fundamental to floodplain meadows in the past, and perhaps also to their restoration and maintenance in future. The form of floodplain meadows surviving in the field and in documents embodies centuries of traditional knowledge: can we learn from the knowledge embedded in our historic landscape as we attempt to re-establish more resilient habitats, places, and communities?

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