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Mapping Historic Floodplain Meadows along the River Windrush

Fjordr 16680

FPM Data – Quick Guide

This Quick Guide accompanies a shapefile – *Windrush_FPM.shp* – that is the principal output of the project *Mapping Historic Floodplain Meadows along the River Windrush*, prepared by Fjordr Ltd. for the Floodplain Meadows Partnership.

The methodology is based on that developed by Fjordr Ltd. for the Historic Extent of Floodplain Meadows: Dorset Stour and Thames Tributaries project, set out in the following report¹:

Firth, E. and Firth, A., March 2022, Historic Extent of Floodplain Meadows: Dorset Stour and Thames Tributaries. Unpublished report by Fjordr Ltd. for the Floodplain Meadows Partnership.

Methodology

The shapefile comprises a single layer containing polygons each representing a Floodplain Meadow (FPM) as spatial information with attributes.

The shapefile covers a study area comprising part of the catchment of the River Windrush. The selected stretches include:

- the main channel of the Windrush from South Leigh upstream to Temple Guiting.
- the River Dickler, from its confluence with the Windrush at Bourton-on-the-Water upstream to Wick Rissington.

The study did not include minor tributaries.

¹ Available online at

<https://www.floodplainmeadows.org.uk/sites/www.floodplainmeadows.org.uk/files/Historic%20Extent%20of%20Floodplain%20Meadows%20-%20Stour%20and%20Thames%20-%20Fjordr%201303022%20Final.pdf>.

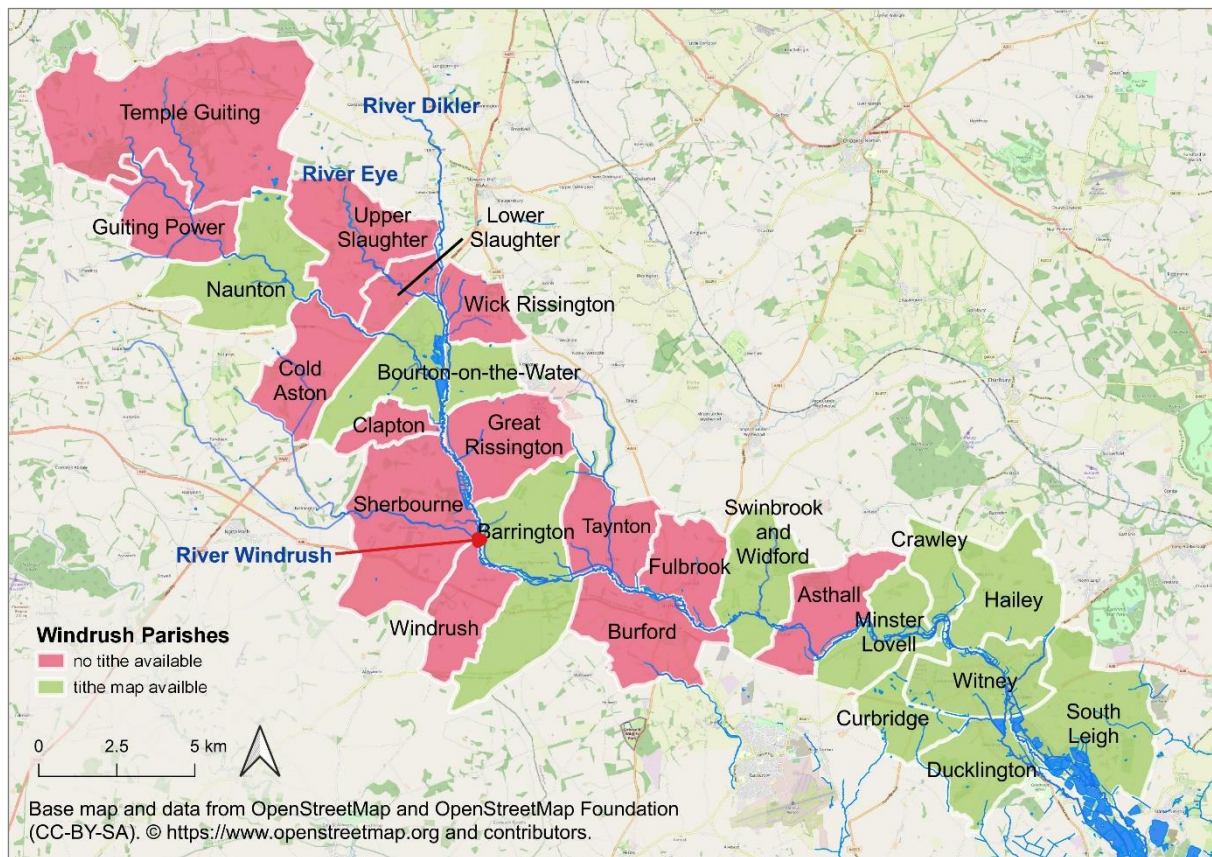


Figure 1: Parishes along the Windrush

For the purposes of collating data, the study area was defined by a 1km buffer on the stretches listed above as mapped on the [OS Open Rivers](#) product.

FPMs have been created based on the interpretation of multiple sources relating to the historic environment, including the following:

- **Historic Ordnance Survey 25 inch maps** 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, the earliest edition, Epoch 1 (publishing date range 1854 to 1901), was the most used.
- **Ordnance Surveyors' Drawings** made between 1780s and 1840 in preparation for the first edition of one-inch OS. The following drawings were available in the project GIS: Burford (1815), Stow on the Wold (1815), Bicester (1815), Woodstock (1811) and Bampton (1811). The maps were accessed via a WMS link to the British Library <http://britishlibrary.georeferencer.com/start>.
- **Tithe maps** dating from c.1840 were accessed from The Genealogist website <https://www.thegenealogist.co.uk/tithe/> where the tithe map and its apportionment records can be viewed for a subscription. Local record offices also hold copies of the tithe maps, though this study has only used online sources.
- **Google Satellite imagery** available online using Google Earth.

- **1840 pre-Gloucestershire Enclosure maps** - limited coverage available at Know your Place: <https://maps.bristol.gov.uk/kyp/?edition=glos>.
- **Environment Agency lidar data** downloaded via <https://environment.data.gov.uk/dataset/2e8d0733-4f43-48b4-9e51-631c25d1b0a9> and visualised using Relief Visualisation Toolbox (RVT) <https://iaps.zrc-sazu.si/en/rvt>.

Various non-map sources have also been used, for example Victoria County History – Oxfordshire available on the British History Online² website. This source documents the history of each parish and may contain information relating to meadows. It is particularly useful for those parishes where there is no tithe map available.

The form of the FPM record is intentionally simple, comprising a single layer in a flat-file format, so that it can be readily included within third-party workspaces/GIS projects.

The mapping of individual polygons is directly from georeferenced historic sources. In some cases, there may be inaccuracies mapping from these early sources, due to the methods used at the time of the survey not being as accurate as in later maps. The georeferencing can sometimes be problematic with old maps, which may not align with their modern counterparts. Where field boundaries or rivers on earlier maps are recognisable on later maps, corrections can be made accordingly, and the most appropriate boundary for an FPM will be mapped.

The following attributes are recorded for each FPM in the shape file attribute table:

ID_HistFPM	Identifying number for each FPM.
FPM_name	Defined by the area where the FPM is located, limited to 254 characters or specific name if one recorded on a source.
County	County FPM is within.
Parish	Parish FPM is within.
River	River FPM is located on.
ModLanduse	Modern land use as seen on the most recent satellite imagery.
FPMNotes	Description of the FPM – limited to 254 characters so necessarily concise.
Lammas	Reference to Lammas in sources. Yes/No field

² <https://www.british-history.ac.uk/search/series/vch--oxon>

Funnel	Does FPM have a characteristic funnel shaped entrance? Yes/No field
Doles	Reference to doles, either in descriptions or visible on map sources such as tithe maps. Yes/no field
Drove	Drove or lanes which connects a settlement to a meadow, often via a funnel shaped entrance to the meadow. Yes/No field
Common	Reference to Common in sources. Yes/No field
Drainage	Reference to drainage in sources. Yes/No field
Placenames	Reference to specific placenames associated with floodplain meadows in sources. List of placenames such as ham, mead, common, lots, allotments, and doles.
Domesday	Whether there a Domesday settlement with recorded acreage associated with the settlement in this parish. Obtained from Open Domesday ³ .
Tithe_Ref	Tithe map reference.
OS_Map_Ref	Historic OS Map reference.
OSSurvey_Ref	Historic OS Survey Drawing reference.
OtherMap	Any other historic map sources, such as estate maps, which reference the FPM.
Rep_link	Report or other reference material where the FPM is identified and if available, the link to the report or reference material.
Confidence	<p>Confidence level in the identification of the FPM, with 1 being low and 5 being high. Confidence reflects the amount of information available about the FPM.</p> <p>A high confidence is assigned to an FPM when there are multiple sources and a high number of criteria about the meadow can be recorded. For example, a meadow that appears on several maps, has a funnel shaped entrance, doles mapped on the tithe map and named as a common in the tithe apportionment records.</p> <p>A low confidence meadow might be an FPM where only the boundaries within the floodplain indicate the presence of a meadow but there is no other evidence available.</p>
Compileby	Who created the record.
Compiledate	Date record created.

³ <https://opendomesday.org/>

Summary of results

Overall, 58 FPMs were identified from the sources and were mapped and recorded in the *Windrush_FPM.shp*.

The criteria and placenames recorded for FPMs can be summarised as follows:

Criteria	Yes	No	Possible
Lammas	0	57	1
Common	8	43	7
Funnel	3	49	6
Doles	3	52	3
Droves	8	48	2
Drainage	45	12	1
Domesday	38	20	

Placename	Count of FPMs
allotment, ham	2
common	1
ham	8
ham, allotment	1
mead	15
mead, ham	1
mead, lot	1
none	28
Total	56

The floodplain of the Windrush between Great Rissington and Witney is quite restricted so the scope for floodplain meadows within the modern risk of flooding area was limited. Where tithe mapping was available it showed that the majority of floodplain was being used as meadow during the early 19th century. It is very likely that gaps in the *Windrush_FPM.shp* reflect an absence of tithe maps or other information enabling floodplain meadows to be identified, rather than an absence of floodplain meadows historically. Figure 2 illustrates the distribution of the floodplain meadows identified along the course of the Windrush.

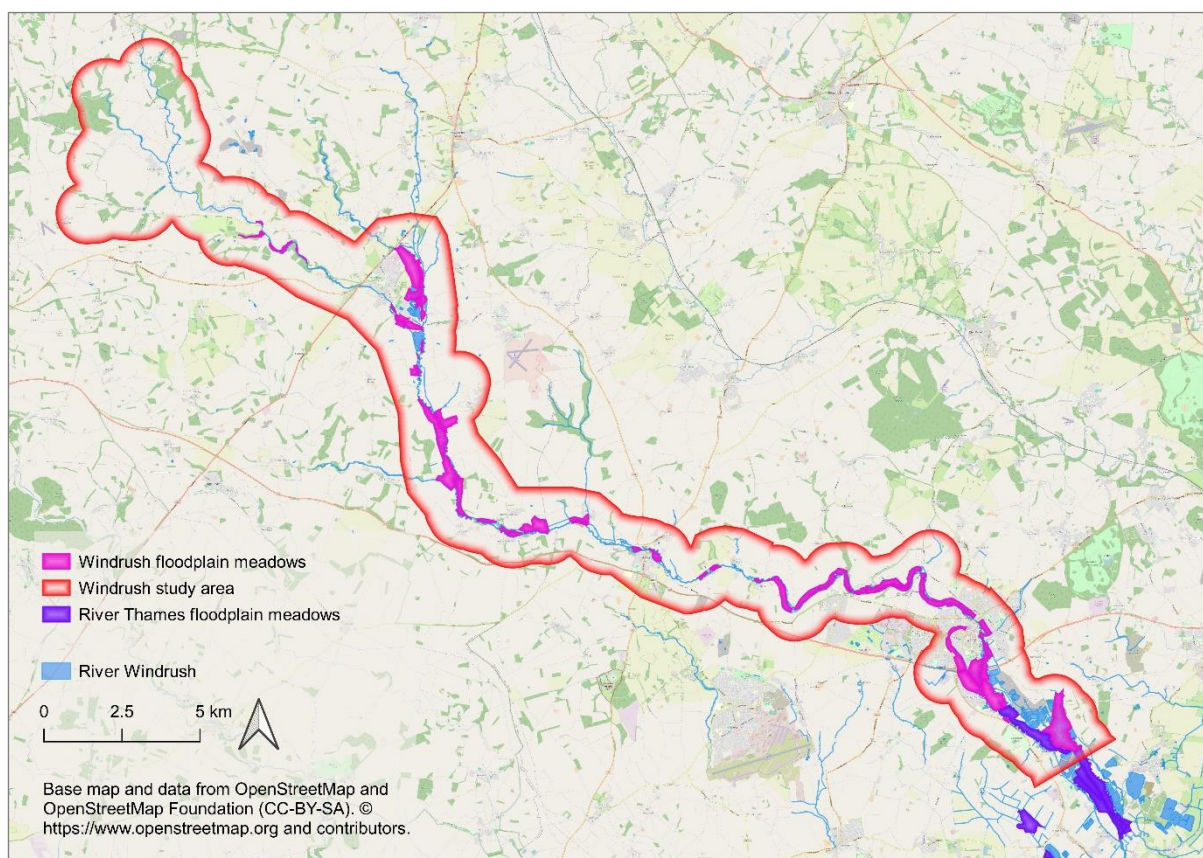


Figure 2: Distribution of Floodplain meadows along the course of the River Windrush

A small number of floodplain meadows were identified from the Victoria County History (VCH) for each parish, as published on the British History Online website. The meadows mentioned in this publication can be difficult to locate with confidence as often the location will be a description or documentary reference to a meadow associated with the settlement. In some cases, VCH provides modern plans that have interpreted historic documents to suggest the field systems at a given point in time. The section on Open Fields and Commons in the Victoria County History for Asthall⁴, mentions several meadows existing since the 14th century onwards, however the locations of these meadows were not entirely clear. FPM 4057 is described as having been identified in a 1688 document as “An irrigated meadow controlled by floodgates, called “In Mead”, and lay probably below Asthall manor house”. The area to the south of the Manor House does not lie within the floodplain, so it is assumed that the meadow was situated to the north of the Manor House. Traces of a single drainage channel appears on the lidar in this area, however no other drainage channels can be seen. There is a second area of “irrigated meadow” recorded in 1814 mentioned in the VCH entry for Asthall. The meadow, named as “In Meadow” was adjacent to Worsham Mill. The lidar shows an area of bedwork water meadow next to the former mill, likely to be this 1814 “irrigated meadow”. However, it is not clear whether these two meadows were

⁴ Asthall Economic History, British History Online available at <https://www.british-history.ac.uk/vch/oxon/vol15/pp55-64#fnn27>

originally part of one much larger meadow that extended along the length of the floodplain at Asthall, or whether they were two distinct meadows.

Bedwork water meadows are likely to have been constructed on the site of earlier floodplain meadows that would have flooded naturally or with the aid of a simple back drain. The purpose of bedwork water meadows was to improve yields by using feeder channels and drains to control flooding of the meadow. Figure 3 shows an area of bedwork meadow at Burford and illustrates how these meadows appear in lidar data. Bedworks do not seem to correspond to areas where doles are marked on tithe maps, which might indicate that bedworks were constructed on former demesne land dating from the medieval period, i.e. meadows owned and worked by the lord of the manor rather than former common meadows being used by villein/tenants of the parish. Thirteen bedwork meadows were identified along the Windrush in the parishes of Boughton-on-the-Water, Burford, Ducklington, Great Barrington, Naunton, Sherborne, Tayton and Upper Slaughter. Of these, six were initially identified from tithe maps while the remaining seven were identified exclusively from lidar.

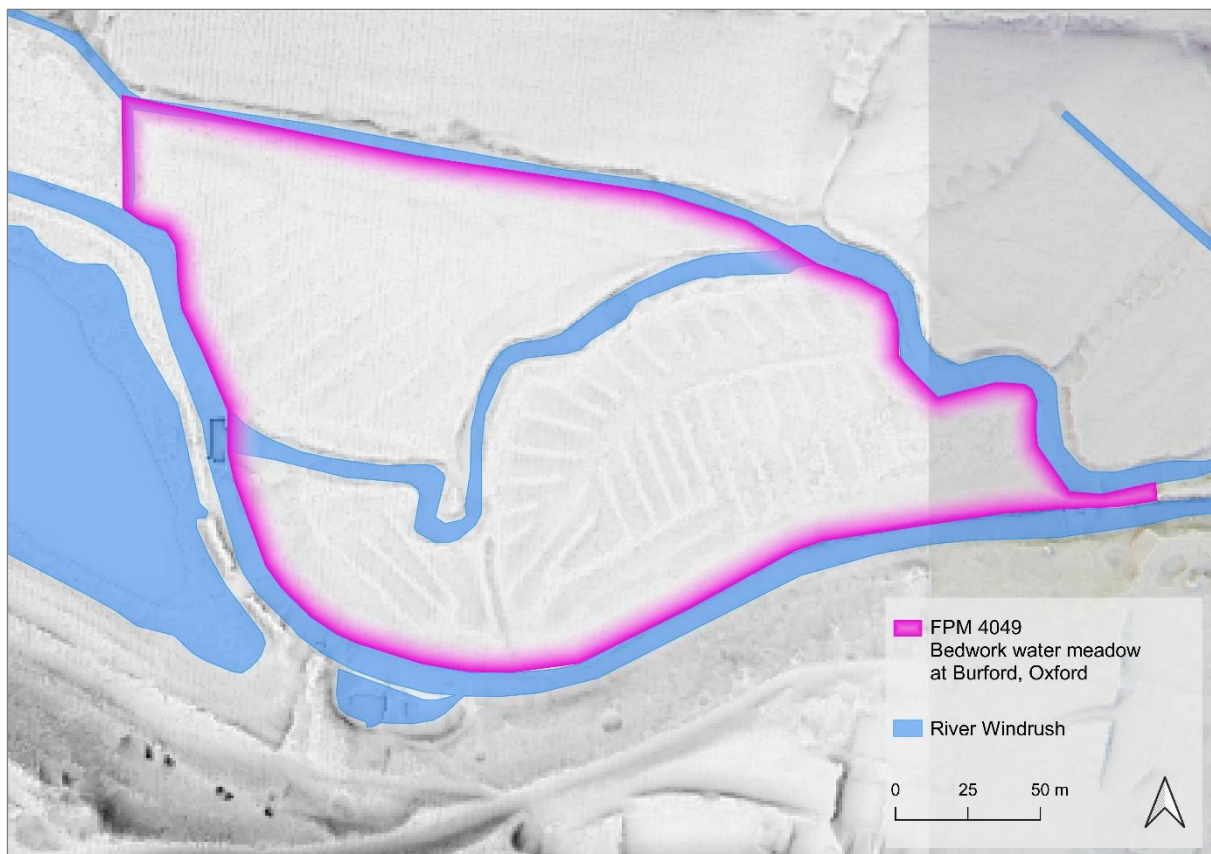


Figure 3: FPM 4049 Bedwork water meadow at Burford Oxford. The drains and channels can clearly be seen on the processed lidar.

Only three floodplain meadows were identified with evidence of dole systems: two floodplain meadows in Witney (FPM 4004 Currbridge Meadow and FPM 4008 The Meadows Allotments between Witney and Hailey); and FPM 4052 Allotment in New Mead,

Ducklington. The evidence of doles was from the tithe apportionment records where there is reference to “allotments” which suggests that these meadows were originally divided into strips or doles (hence allotments) indicating they were managed in common.

Only three meadows were identified with funnel shaped entrances associated with droves, while eight meadows had droves associated with them but no clear funnel shaped entrances. The distinctive entrances persist in the landscape as the land is enclosed around them, but sometimes enclosure results in a loss of these earlier forms. Figure 4 illustrates the northern extent of FPM 4056 - Little Moor Meadow and Great Meadow at South Leigh. This is a large floodplain meadow, made up of several smaller adjoining meadows which have all been recorded as one area. Moor Lane (shown in orange) leads to the funnel shaped entrance at plots 209 and 208. These plots were recorded in the Tithe Apportionment for South Leigh as “In Hardwick Meadow”. The characteristic funnel shaped entrance can be seen joining Moor Lane which then leads north east to the settlement at South Leigh.

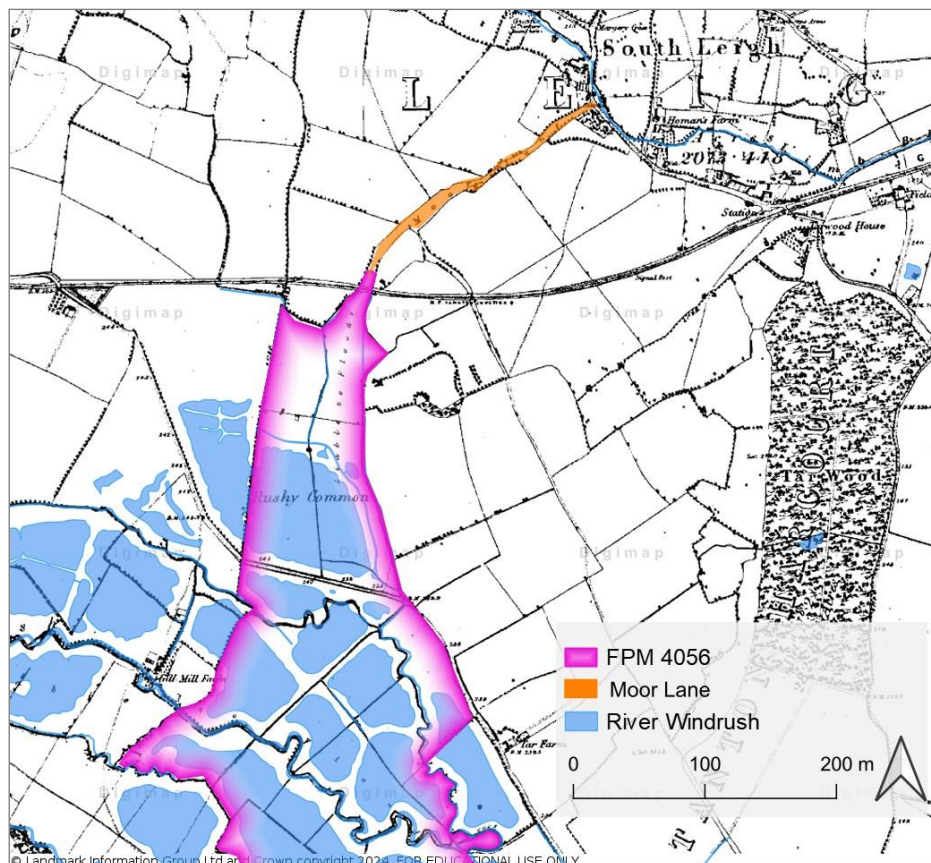


Figure 4: part of FPM 4056 Little Moor Meadow and Great Meadow at South Leigh

Jeffrey's map of 1766-1767 illustrates FPM 4056 with its funnel shaped entrance (Figure 5).



Figure 5: *The County of Oxford, Surveyed Anno MDCCLXVI and VII, and Engraved by Thomas Jeffreys, Geographer to His Majesty MDCCLXVIII, 1766-1767* available at <https://heritagesearch.oxfordshire.gov.uk/images/POX0081900>

Of the meadows recorded, 37 were in settlements that had meadows recorded in Domesday; 20 were in parishes that had no meadow recorded in Domesday, or where the settlement was not recorded.

There are several scheduled sites along the course of the Windrush study area adjacent to some of the meadows that were identified. FPM 4021 at Asthall is located to the south of a Roman villa⁵; the bathhouse of which was fed by a former channel of the Windrush. It is not known if the meadow existed during the Roman period but the location of the villa so close to the river may indicate that not only was the river providing water for the bathhouse, but this meadow may well have been used to graze animals and provide hay. At FPM 4030 Lower, Great and Large Meadows at Barrington there is a Romano-British Villa⁶ located centrally within the meadow. There is both artefactual and documentary evidence of haymaking during the Romano-British period, which then continued into the early medieval period. The use of floodplains for haymaking during the Romano-British period is discussed more fully in Firth and Firth's study of floodplain meadows on the Stour and Thames (2022, page 3).

Four meadows (FPM 4007 Grimes Mead; FPM 4005 Langel Common; FPM 4006 Mill Ham; and unnamed meadow FPM 4009) were recorded near the remains of a medieval moated manor, priory, and settlement at Cogges⁷, suggesting an association.

⁵ Roman villa and associated bath house 450m north west of Lower Field Farm <https://historicensland.org.uk/listing/the-list/list-entry/1015160>.

⁶ Romano-British villa south east of Great Barrington <https://historicensland.org.uk/listing/the-list/list-entry/1003325>.

⁷ The remains of a medieval moated manor, priory, settlement and associated features, Cogges <https://historicensland.org.uk/listing/the-list/list-entry/1016269>.

Further upstream at Minster Lovell is the medieval mansion and priory site of Minster Lovell Hall⁸ where six meadows were identified. FPM 4018 Upper Part of Upper Town Mead and Filmers Mead and FPM 4019 Broad Ham are both to the west of Minster Lovell Hall; FPM 4019 is associated with a mill site, which may be medieval in origin. Adjacent to the east of the scheduled monument is FPM 4014 Weir Mead; and to the west is FPM 4015. FPM 4014 was recorded in the tithe as plot 176 Weir Mead, 172 Broad Mead and 161 Tub Mead; Doctors Ditch forms the back ditch/northern boundary of this meadow and to the north there is medieval ridge and furrow visible in the lidar data. Fish ponds are visible in the west extent of the meadow. Two further meadows lie on the opposite side of the Windrush to the medieval site: FPM 4017 Over Mead and Lower Mead and Sankey; and FPM 4016 Lower Town Mead, although the 1811 OS Survey Drawing for Woodstock shows these meadows as one continuous meadow.

The medieval settlement of Widford⁹ has three meadows located nearby. These meadows are FPM 4025 Lower Ham Meadow; FPM 4026 Rushy Meadow; and FPM 4024 Upper Meadow. FPM 4025 Lower Ham Meadow is recorded on the other side of the Windrush to the medieval settlement. FPM 4026 Rushy meadow lies directly south of the medieval settlement at Widford; FPM 4024 Upper Meadow lies to the south west and has withy plots adjacent to it. The medieval settlement, its associated fish ponds and ridge and furrow field systems can be seen in the lidar data.

FPM 4034 Lower, Middle and Upper Meadow near Roundhill Farm in Naunton is located to the north east of a deserted medieval village of Lower Harford¹⁰.

Below the scheduled monument of Salmonsbury Camp¹¹ there is a complex area of floodplain meadows recorded on tithe and pre-enclosure maps (FPM 4040, 4035, 4034, 4037, 4032) that all lie within the floodplain between the River Dickler, River Eye and River Windrush.

Together, the association of identifiable floodplain meadows with medieval, Roman and even Iron Age settlement suggest that the River Windrush has particular potential for further exploring the origins and development of floodplain meadows within the wider historic landscape.

⁸ Minster Lovell Hall <https://historicengland.org.uk/listing/the-list/list-entry/1015321>.

⁹ Medieval settlement of Widford immediately east of Manor Farm <https://historicengland.org.uk/listing/the-list/list-entry/1020970>.

¹⁰ Lower Harford medieval settlement <https://historicengland.org.uk/listing/the-list/list-entry/1018528>.

¹¹ Iron Age fortified enclosure known as Salmonsbury Camp <https://historicengland.org.uk/listing/the-list/list-entry/1017340>.

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