

ARCHAEOLOGICAL DESK-  
BASED ASSESSMENT OF FLOOD  
DEFENCES TO THE WEST OF  
LONGNEY, GLOUCESTERSHIRE

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Illustrated by Carolyn Hunt

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# **Archaeological desk-based assessment of flood defences to the west of Longney, Gloucestershire**

**Darren Miller**

## **Part 1 Project summary**

This report describes the results of a desk-based assessment of flood defences to the west of Longney, Gloucestershire (NGR SO 37620 21200 to 37610 21451). The assessment was undertaken by the Worcestershire Historical Environment and Archaeology Service on behalf of the Environment Agency in order to address the implications of proposed refurbishment works. The assessment involved the collection and analysis of SMR data, archives, and secondary sources. A brief site visit was also made. The assessment concluded that the existing flood defences are mostly of 20<sup>th</sup> century date, though in several sections they probably incorporate the remains earlier floodbanks. One section, between Hill Farm and Water End, was first built before 1780, and other sections near the north and south ends of the defences were first built between 1780 and 1815. The defences also incorporate two discontinuous floodbanks built between 1815 and 1884. Refurbishment along these sections might expose remains of the earlier floodbanks and provide an opportunity for archaeological observation and recording.

## Part 2 Detailed report

### 1. Background

#### 1.1 Reasons for the project

The project was undertaken on behalf of the Environment Agency, who were required by Gloucestershire County Council to address the archaeological implications of maintenance work on a length of flood defences in the parish of Longney, Gloucestershire. The requirement was in accordance with local and national planning guidelines relating to archaeology.

#### 1.2 Project parameters

The project conforms to a brief prepared by Gloucestershire County Council (2000) and to the Service's own proposal (AS 2004). The project also conforms to the *Standard and guidance for archaeological desk-based assessment* (IFA 1999).

#### 1.3 Aims

The aims of the assessment were as follows:

- to collect relevant information relating to the archaeological potential of the proposed development area
- to assess the potential significance of any archaeological remains and the built heritage
- to assess the impact of the proposed development on these archaeological remains and the built heritage

### 2. Methods

#### 2.1 Documentary search

Information relating to known sites in the area was obtained from the Gloucestershire Sites and Monuments Record (SMR). Other information was obtained from Gloucestershire County Record Office (GRO), and the archives of previous projects currently held by the Service. The main sources used during the project are summarised below.

##### *Cartographic sources*

- Anon, nd [20C] *Field-names map* (annotation of Ordnance Survey, 1924 *Gloucestershire sheets 32 NE* (GRO D5555/1/28))
- Ordnance Survey, 1902 *Gloucestershire, sheet 32 SE* (1:10,560)
- Ordnance Survey 1955, Sheet SO 71 SE (1:10,560)
- Ordnance Survey 1980, Sheet SO 71 SE (1:10,000)
- Ordnance Survey 2004 [Digital mapping]
- Merrett, J 1780 *Survey of Benjamin Hyett's estate, Longney, with explanation of lots in Southmoor and Bunnymill Meadows* (GRO D6/E4; Photocopy 490)

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- Merrett, J 1772 *A map of the estate at Dinny in the Parish of Minsterworth and Doodings Farm in the Parish of Longney, Gloucestershire, belonging to Mr Daniel Ellis* (GRO Photocopy 283)

#### *Aerial photographs*

- Ordnance Survey 2003 [Vertical aerial photographs available via [www.ordnancesurvey.com/getamap](http://www.ordnancesurvey.com/getamap)]

#### *Documentary sources*

- Allen, J R L, and Fulford, M G, 1990a Romano-British and later reclamations on the Severn salt marshes in the Elmore area, Gloucestershire, *Trans Bristol and Gloucestershire Archaeol Soc*, Vol 108, 17-32
- Allen, J R L, and Fulford, M G, 1990b Romano-British Wetland Reclamations at Longney, Gloucestershire, and evidence for the early settlement of the inner Severn estuary, *Antiquaries Journal*, Vol 70, part 2, 288-326
- Cole, S D, 1912 *The sea walls of the Severn* (GRO ROL E1)
- Elrington, C R, 1972 Longney, in C R Elrington, and N M Herbert (eds), *A History of the County of Gloucestershire*, Vol 10, 197-205
- Goad, J, and Darch, E, 2003 *Archaeological evaluation of the river Severn flood defences at Longney, Gloucestershire*. Historic Environment and Archaeology Service, Worcestershire County Council, report 1161
- Miller, D, 2003 *Archaeological desk-based assessment of flood defences at Longney, Gloucestershire*, Archaeological Service, Worcestershire County Council, report 1158
- Norman, R A, 1951 The 'Lot Meadows' of Longney, based on the Hyett survey of 1780, in, *Some notes on Gloucestershire History* (University of Bristol Department of Adult Education), 26-27

## 2.2 **Fieldwork**

A site visit was made on 30<sup>th</sup> April 2004, during which the length of the flood defences scheduled for maintenance was observed, and notes were made on a 1:5000 plan. Digital photographs were also taken to supplement the record, with photo-points being annotated on the plan.

## 2.3 **Assessment**

Once collected, the information from the various sources was considered alongside the proposed maintenance works. In particular, the origins and development of the existing sea defences was established from historic maps, and from observations made in the field, while the archaeological and historical context was established from SMR data and secondary sources.

## 3. **Topographical context**

The length of flood defences with which this project is concerned lie along the east bank of the River Severn, in the parish of Longney, c7km south-west of Gloucester (Fig 1). The geology, soils and topography of the wider area reflect its position on the floodplain of a major post-glacial river, and its more recent history of reclamation for agricultural use. In

summary, deep alluvial silts deposited by the river are contained by a ridge of Triassic and earlier rocks (capped by fluvio-glacial gravels) that lie c1.2km to the south of the present channel (Allen and Fulford 1990a, 19). The alluvial silts show that a varied wetland environment obtained in the area throughout most of the Holocene period (10,000BC to present), although the present soils and the marked differences in surface levels are largely the result of successive reclamations and improvements beginning in the Roman period.

#### 4. **Archaeological and historical context**

Archaeological areas and sites in the vicinity of the flood defences are shown on Fig 3 and those to the west of the Severn or otherwise relevant to the assessment are described in tabular form below (information supplied by Gloucestershire Sites and Monuments Record).

<b>Gloucs SMR reference</b>	<b>NGR OS grid reference</b>	<b>Site name/description</b>	<b>Date</b>
4648	376350 212650	Cropmark ditches	Undated
4896	376300 211000	Cottage	?15C
5295-5297	375980 213670	Remains of cross	Medieval
7081	377400 213000	Find-spot of Roman coin	AD 76+
8336	376240 212820	Independent Congregational Chapel	Post-medieval
13637	377000 212500	Site of windmill	Medieval
14519	376000 213000	Field survey suggesting Roman reclamation	?Roman (1 <sup>st</sup> - 4 <sup>th</sup> C)
16702	376100 214900	Ridge and furrow cropmarks	Post-medieval
17225	375000 210700	Floodbank	?Roman
17598	376200 213400	Castle End farm	Medieval
19681	39430 210700	Archaeological watching brief on floodbank 17225	Post-medieval
22192	375840 214420	Desk-based assessment and evaluation of flood defences at Longney	?Roman to post-medieval

*Table 1: Archaeological sites in the vicinity of the flood defences*

These records reflect the extent of archaeological investigation and recording in the Longney area, most of which has focused on the flood defences. A field survey in the late 1980s (2192) suggested that the defences to the north of the present study area (22192) and those on the west bank further to the south (17725) were of Roman origin (Allen and Fulford 1990a; Miller 2003), although no proof of this suggestion was recovered during later small-scale excavations (22192; Goad 2003).

#### 5. **The development of the flood defences**

The development of the flood defences to the west of Longney can be divided into four stages.

##### 5.1 **Stage 1: before 1780**

The first stage was apparently the construction of the floodbank leading westwards from Hill Farm (formerly Halmer's Farm) to a point near Water End (Figs 3 and 4). Three lines of evidence point to this conclusion, and to a *terminus post quem* date of construction. In the first place, the north side of the Hill Farm to Water End floodbank is clearly abutted by the

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floodbank to the north, which was constructed in 1960-1 (Fulford and Allen 1990a, 20). Secondly, the land to the north of the Hill Farm to Water End floodbank is approximately 3m higher than it is to the south, showing that alluviation continued to the north for a long time before the 1960s (Fulford and Allen, 1990a, fig 1b, reclamation III). Thirdly, a line in the approximate position of the Hill Farm to Water's End floodbank is shown on a plan made by Merrett in 1780 (Fig 3). It is therefore almost certain that the Hill Farm to Water End floodbank was present before 1780, as were the main east-west drainage ditches also shown by Merrett: between them, these features seem to have allowed the documented arable fields and "dole" meadows to be successfully farmed (Norman 1951). It is uncertain how long these arrangements had been in place before 1780. A 17<sup>th</sup> or early 18<sup>th</sup> century seems likely, in view of the contemporary material recovered from the floodbanks further to the north (Goad 2003), and the characteristic pattern of the enclosed fields shown on Merrett's map. A Roman or medieval date of construction seems far less likely, but cannot be ruled out.

## 5.2 **Stage 2: 1780-1815**

The second stage in the development of the flood defences seems to have been the construction of a floodbank from Water End to Lynch Cottage, south of Longney at some point in the late 18<sup>th</sup> or early 19<sup>th</sup> century. At all events, no other floodbanks appear on Merrett's plan of 1780, but floodbanks roughly parallel to those that now exist are clearly shown on the Longney Inclosure Map of 1815 (Fig 4). Before this development, the land seems to have been served adequately by the Hill Farm to Watersend floodbank, and by two large east-west drainage ditches also shown by Merrett (Fig 3). The new floodbank seems to have been built in two sections: the northern section curved around Water End up to one of the drainage ditches. The southern section began on the other side of this drainage ditch, continued across the other drainage ditch, and then turned sharply to the east, towards Lynch Cottage (Fig 4). The aim of the floodbank was evidently to improve the farmland on the landward side, while maintaining the existing drainage system (the northern drain may have remained open to the Severn, although the map suggests that the southern drain was culverted beneath the floodbank).

## 5.3 **Stage 3: 1815-1884**

The third stage of development was apparently the construction of the short floodbanks shown on the first edition Ordnance Survey map of 1884 (Fig 5). The same map shows that the northern end of the earlier floodbank near Water End had been removed, and that the southern end of the floodbank near Lynch Cottage had been decayed to some extent. The map also shows that a brickworks had been established on an undefended stretch of riverbank.

## 5.4 **Stage 4: 1960-1**

The fourth and final stage of development was evidently the construction of the existing flood defences in 1960-1 (or at any rate, before 1974). For the most part, the new defences were built well to the west of the earlier floodbanks, but they probably incorporated short sections of the floodbanks near Water End and Lynch Cottage, built between 1780 and 1815, and definitely included the two short floodbanks built between 1815 and 1884. In terms of their construction, the existing flood defences seem to have been built on a larger scale than those further to the north, although they are otherwise unremarkable. It is likely that the main drainage ditches and their outfalls were culverted when the new defences were built. Most of these features were inaccessible during the field visit, though a modern-looking retaining wall was located close to the southern outfall.



## 6. **Significance and recommendations**

As discussed above, most of the existing flood defences to the west of Longney are of 20<sup>th</sup> century date. They are also typical of those found on either side of the Gloucestershire Severn. As monuments, therefore, they cannot be accorded much archaeological significance. However, in several sections, the modern defences probably incorporate the remains of earlier floodbanks that would be better understood if a limited programme of archaeological work were to be undertaken during the refurbishment works. In particular, it would be useful to establish the original date of construction of the floodbank between Hill Farm and Water End, which was certainly present by 1780. Sample trenching in this section is recommended.

## 7. **Publication summary**

The Service has a professional obligation to publish the results of archaeological projects within a reasonable period of time. To this end, the Service intends to use this summary as the basis for publication through local or regional journals. The client is requested to consider the content of this section as being acceptable for such publication.

*A desk-based assessment of flood defences to the west of Longney, Gloucestershire (NGR SO 37620 21200 to 37610 21451) was undertaken by the Worcestershire Historical Environment and Archaeology Service on behalf of the Environment Agency in order to address the implications of proposed refurbishment works.. The assessment involved the collection and analysis of SMR data, archives, and secondary sources. A brief site visit was also made. The assessment concluded that the existing flood defences are mostly of 20<sup>th</sup> century date, though in several sections they probably incorporate the remains earlier floodbanks. One section, between Hill Farm and Water End was first built before 1780, and other sections near the north and south ends of the defences were first built between 1780 and 1815. The defences also incorporate two discontinuous floodbanks built between 1815 and 1884. Refurbishment along these sections might expose remains of the earlier floodbanks and provide an opportunity for archaeological observation and recording.*

## 8. **The archive**

The archive consists of:

- 1 Computer disk

## 9. **Acknowledgements**

The Service would like to thank Giles Matthews (Area Environment Assessment Officer, Environment Agency), and Anna Morris (Gloucestershire County Council SMR Officer) for their kind assistance.

## 10. **Personnel**

The documentary research and fieldwork were undertaken by Darren Miller, and the illustrations were produced by Carolyn Hunt. The project manager responsible for the quality of the project was Derek Hurst.

## 11. **Bibliography**

Allen, J R L, and Fulford, M G, 1990a Romano-British and later reclamations on the Severn salt marshes in the Elmore area, Gloucestershire, *Trans Bristol and Gloucestershire Archaeol Soc*, Vol 108, 17-32

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Allen, J R L, and Fulford, M G, 1990b Romano-British Wetland Reclamations at Longney, Gloucestershire, and evidence for the early settlement of the inner Severn estuary, *Antiquaries Journal*, Vol 70, part 2, 288-326

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Elrington, C R, 1972 Longney, in C R Elrington, and N M Herbert (eds), *A History of the County of Gloucestershire*, Vol 10, 197-205

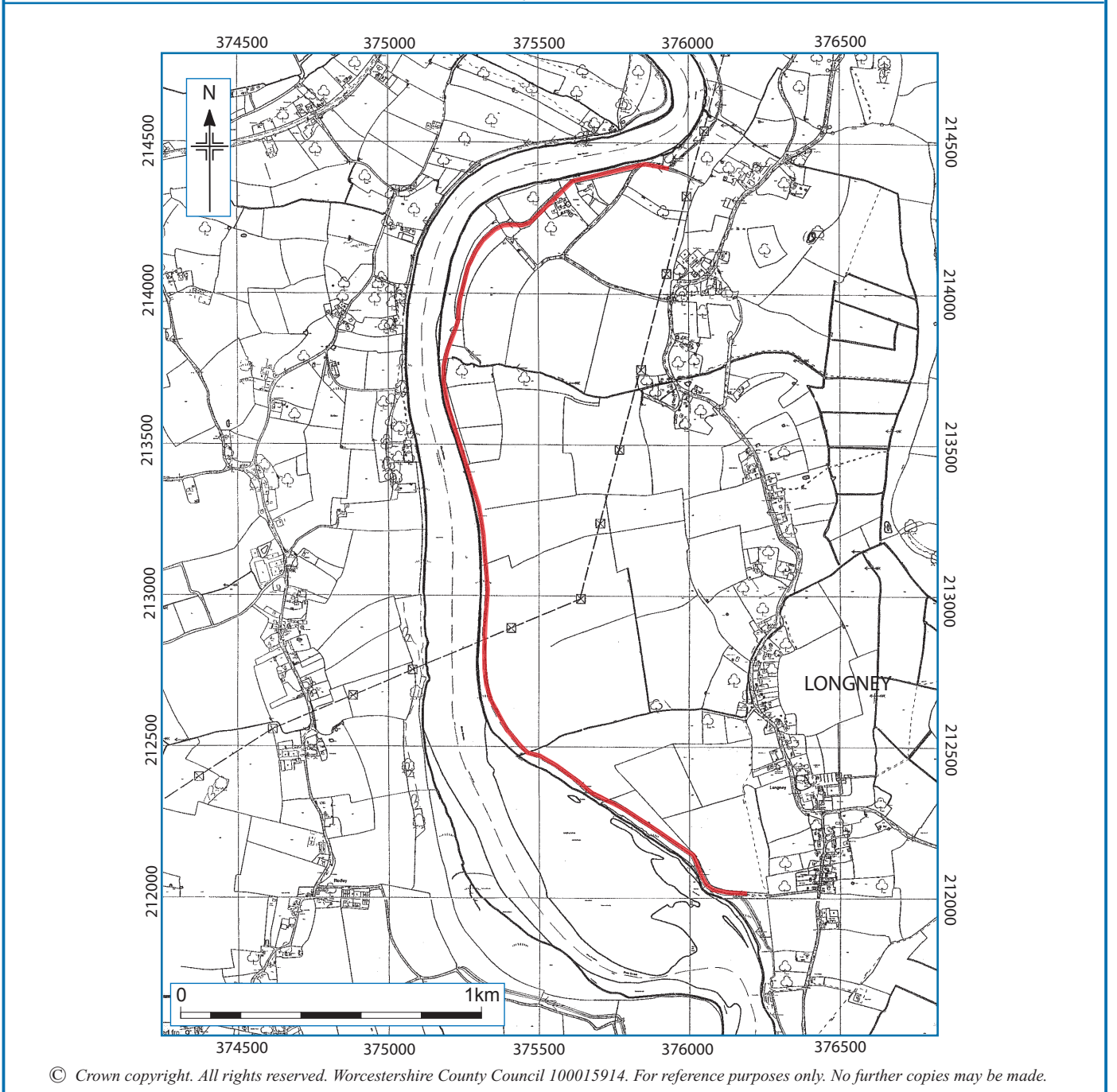
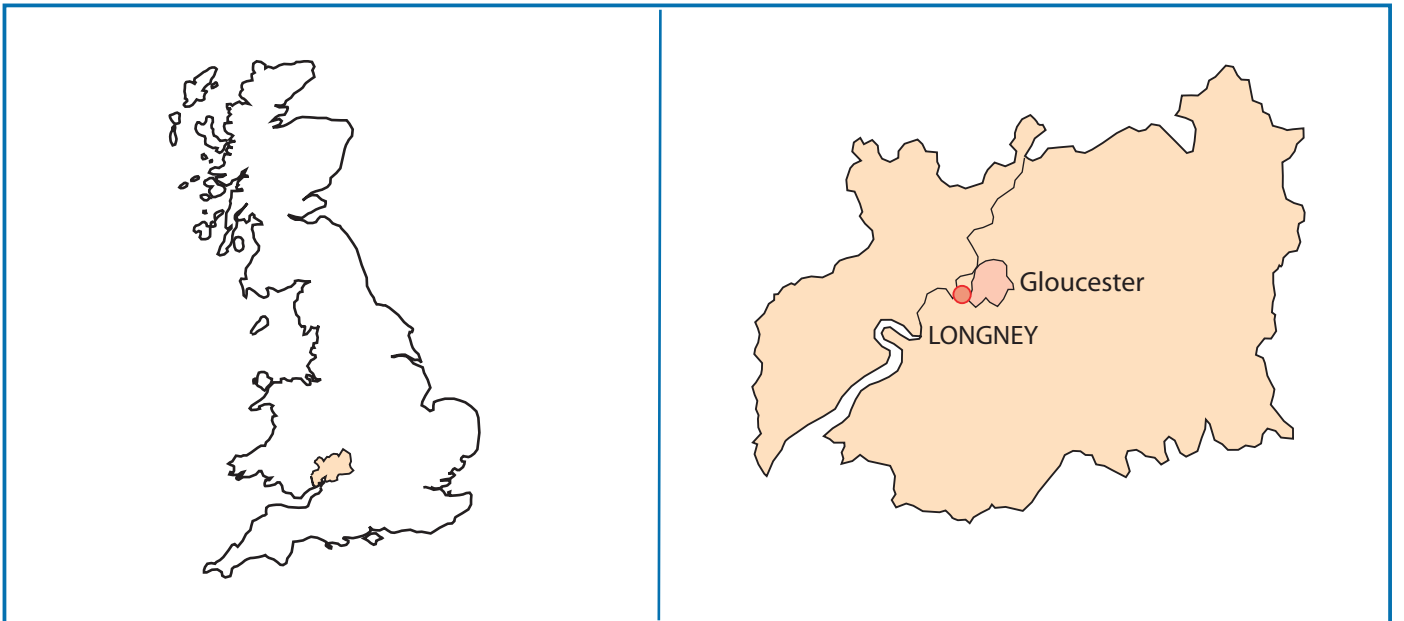
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Norman, R A, 1951 The "Lot Meadows of Longney, based on the Hyett survey of 1780, in University of Bristol Department of Adult Education, *Some notes on Gloucestershire History*, 26-27

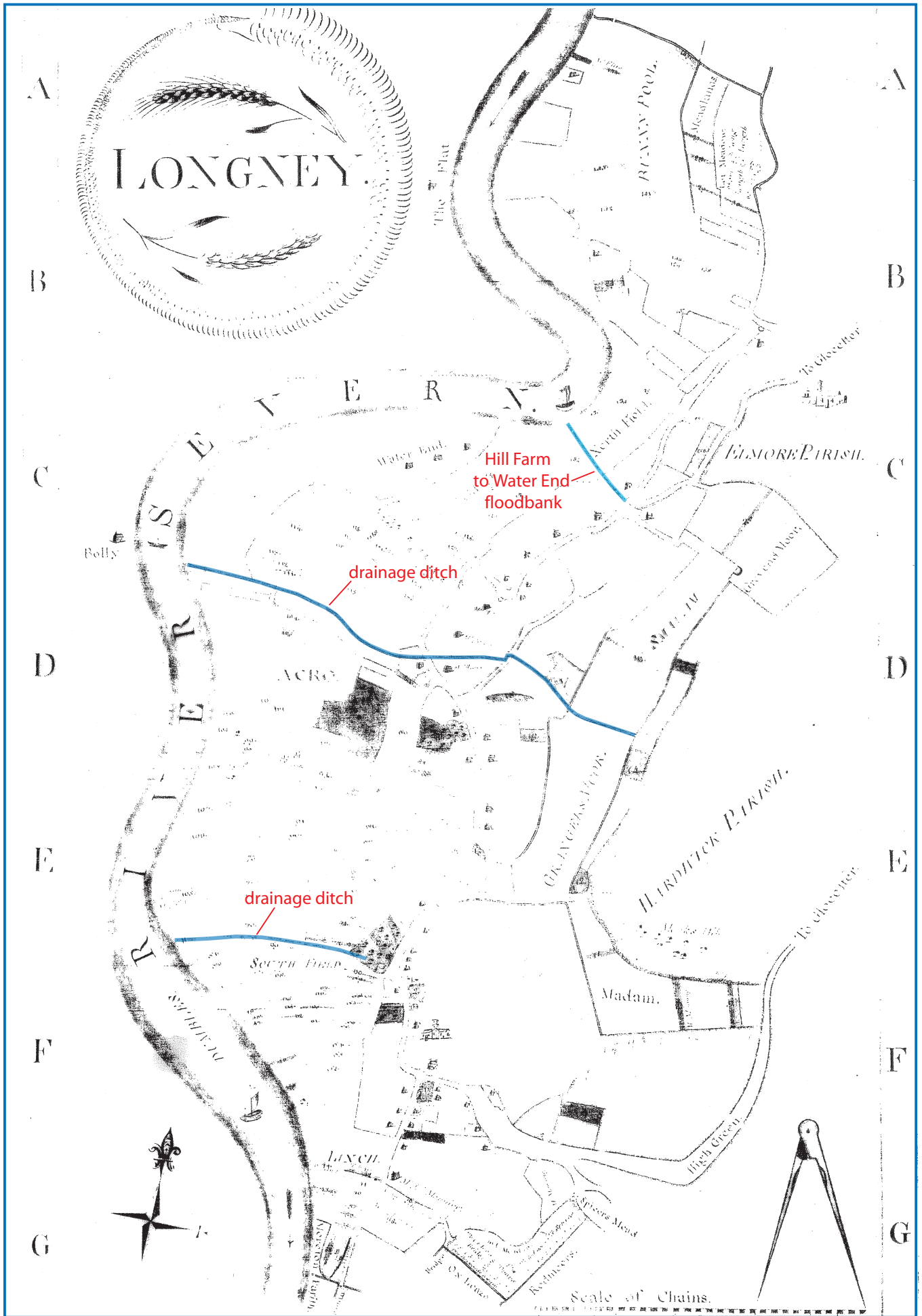
IFA, 1999 *Standard and guidance for archaeological desk-based assessment*, Institute of Field Archaeologists



Location of the site.

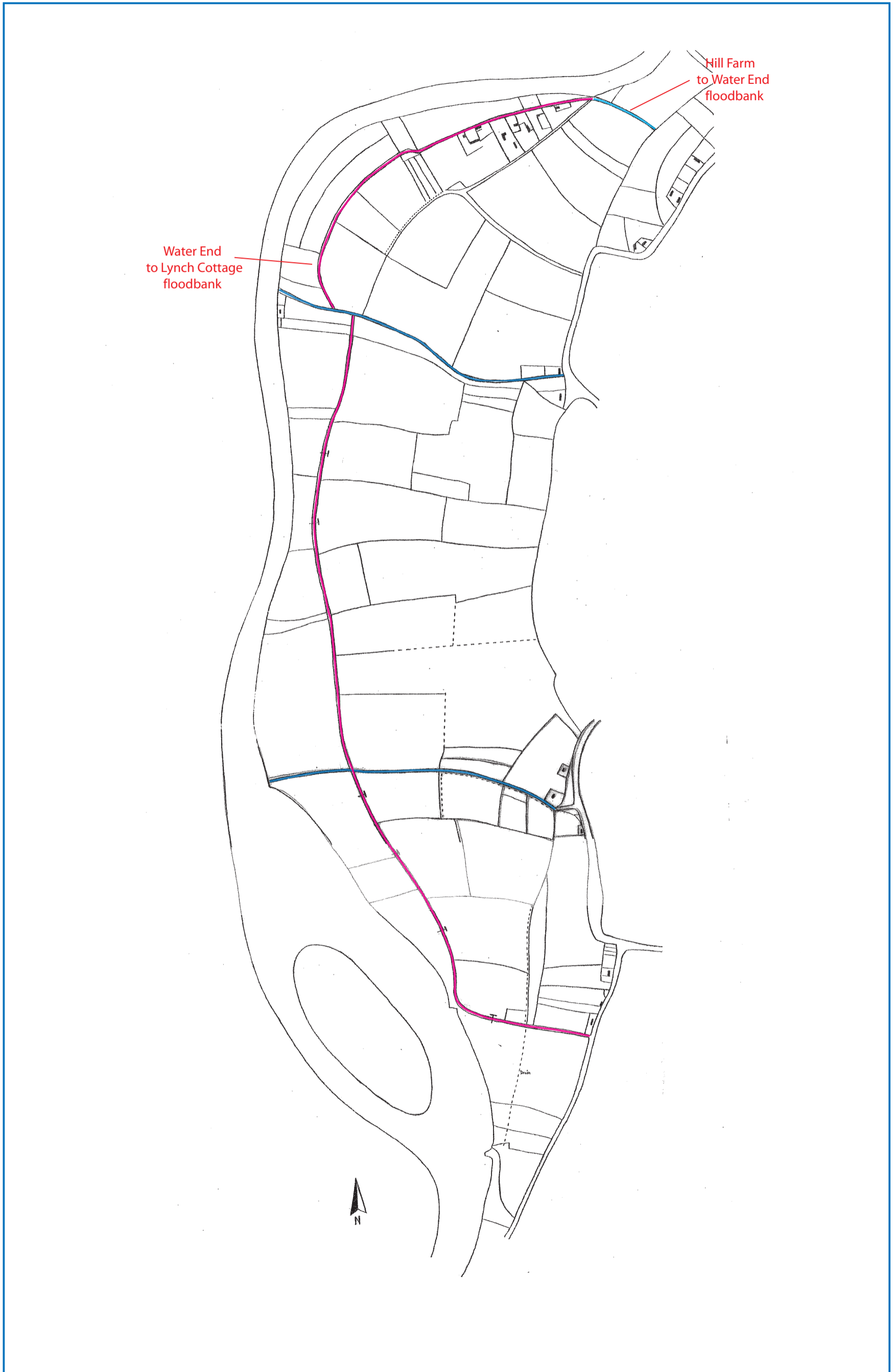
Figure 1





Survey of Benjamin Hyett's estate by John Merrett, 1780.  
 (GRO D6/E4, Photocopy 490)

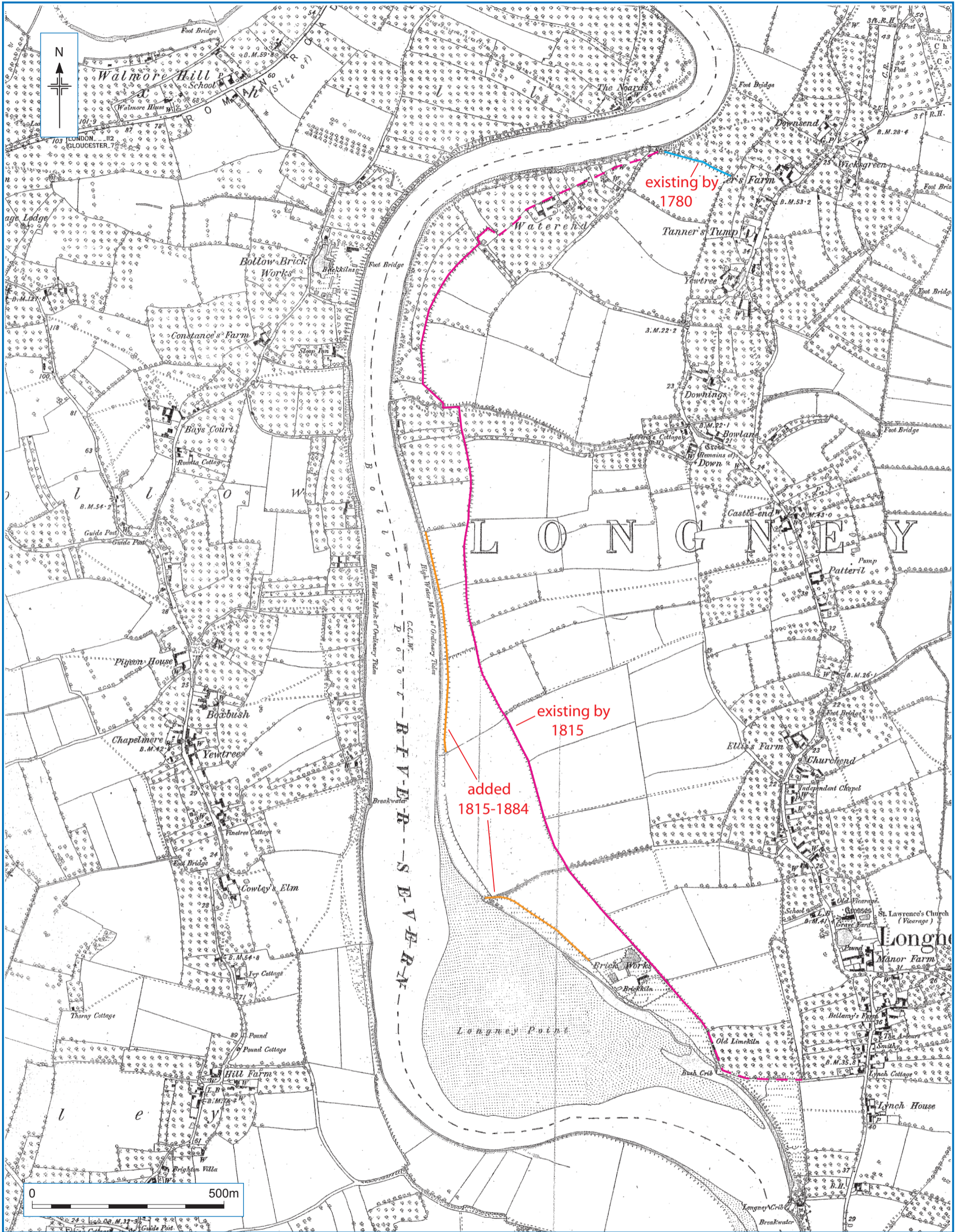
Figure 3



Extract from Longney Inclosure map, 1815 (GRO D2305/3).

Figure 4



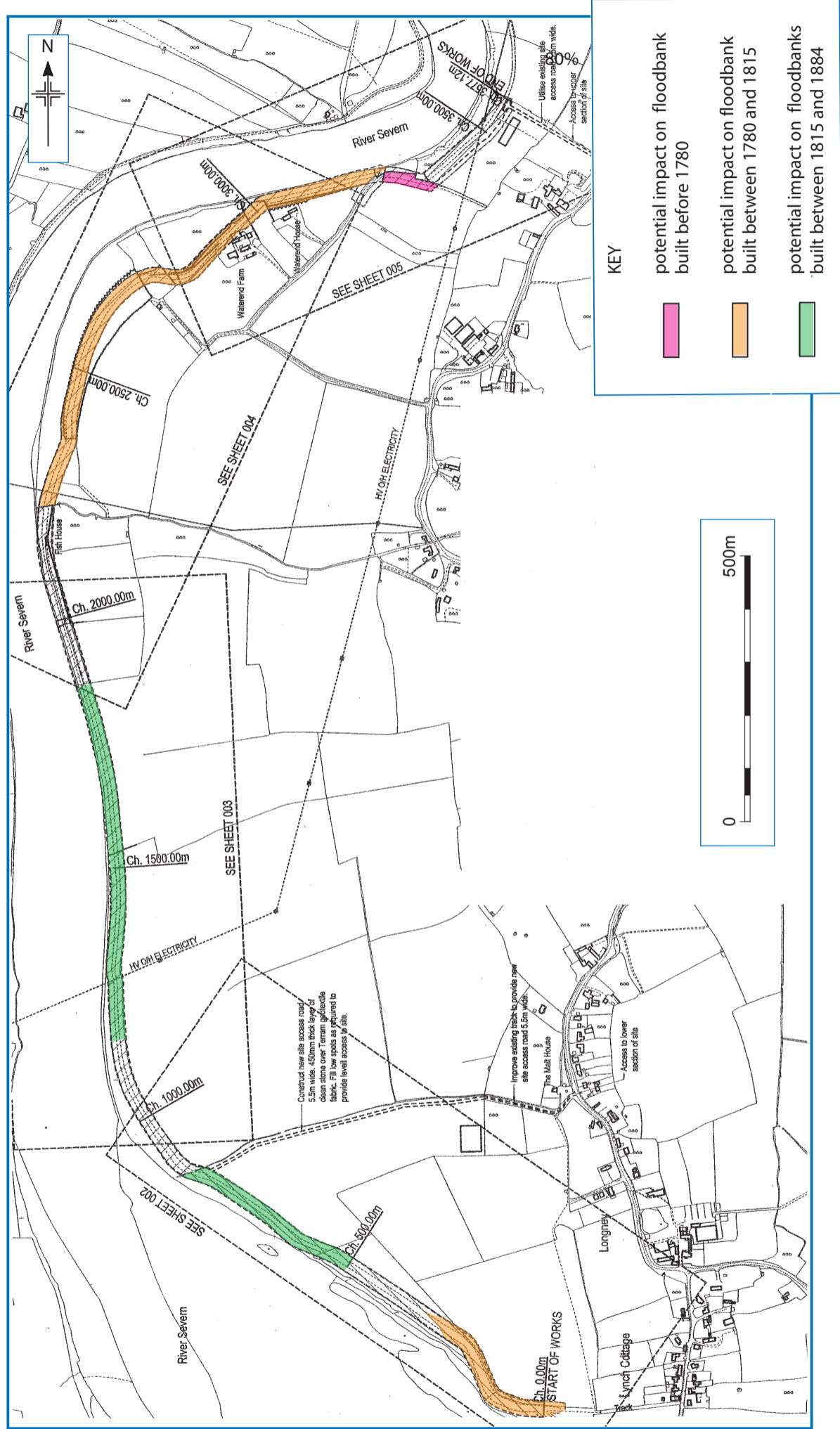


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Figure 5

19th century floodbanks shown on OS 1884.





Summary of potential impacts on remains of earlier floodbanks (based upon Environment Agency dwg no.001).

Figure 6