

YCCART 2022/Y3

Who made the Kenn River? (Part 1: Backwell Common to Nailsea Wall)

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Kenn River, looking upstream towards Nailsea Court, from Sluice Stile, where the Kenn births the Little River (right)

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*'til last by Philip's Farm I flow
To join the brimming river,
For men may come and men may go
But I go on for ever'*

Alfred Lord Tennyson - *The Brook*

Not in the Northmarsh, you don't

Vince Russett

This report is (by kind permission of Nailsea and District Local History Society) *'A study in the Landscape Archaeology of Somerset's North Marsh Vol 3'*

Volumes 1 (*'Who made the Land Yeo?'* (1998) and 2 *'Boggy Meares and Queachy Fennes'* (2000), both by the late Keith S Gardner. were published by the NDLHS, and are still available at <http://www.ndlhs.org.uk>.

Abstract

Despite Alfred Lord Tennyson's avowed belief (see above) and the general public belief that rivers are 'of time immemorial' and eternal and unchanged, study of the Kenn River shows how misleading this belief is. With the probable sole exception of the Congresbury Yeo, rivers in the Northmarsh are largely the result of engineering works at various times from the pre-Norman (possibly even Roman) period to the present. In the Northmarsh, these works have been almost entirely for the benefit of agriculture and drainage: ironically, the Congresbury Yeo is the one river there with indisputable evidence of river transport.

Acknowledgements

This survey could not have been carried out without the ability to use the network of Public Rights of Way, maintained by North Somerset Council, and access to the government lidar data used here. My debt to the pioneering works of Keith Gardner and Stephen Rippon will be obvious.

Introduction

Yatton, Congresbury, Claverham and Cleeve Archaeological Research Team (YCCCART) is a Community Archaeology team working across northern Somerset.

Our objective is to undertake archaeological fieldwork to enable a better understanding and management of the heritage of the area, while recording and publishing the activities and locations of the research carried out.

Site location



Fig 1: Location (Backwell Common to Backwell Lake)



Fig 2: Location (Backwell Lake to Chelvey)



Fig 3: Location (Chelvey to West End)



Fig 4: Location (West End to Nailsea Wall)

The Kenn rises at ST 49337000 (other risings *are* available), running into a roadside ditch on the east side of Backwell Bow, the road leading from Backwell to Nailsea via Backwell Common. From here, it runs due north in the roadside ditch to Backwell Bow itself, a stone bridge at ST48767036 (Fig 1), veering away from the road to form the rear boundary of properties at Brook Farm (ST49157034) and closer to the bridge at ST48837038. At Backwell Bow itself, the stream meets water from the east, and merged, they form the parish boundary of Nailsea (before 1811, Wraxall) with Backwell.

From Backwell Bow, what is now recognisably a stream (if a very muddy one!) that will be called Kenn River further down, below Chelvey, meets the northern end of the causeway in Station Road at ST 47886956, from which the stream today turns and runs south alongside the causeway (Fig 1; Fig 2). Here, the parish boundary leaves it to rejoin lower down the river.

Once the line of the stream leaves Backwell Lake (a 20th century digging), it runs due SW to eventually meet the railway by Brookside Cottage at ST47366896. Under the railway, the stream (and its accompanying parish boundary) run along the south edge of a large railway borrow pit. It then passes back under the railway, and runs in a loop around the northern end of the slightly higher ground around Chelvey. It then crosses the road outside the entrance to the drive of Nailsea Court (where was a ford until the mid-20th century) (Fig 2).

It then enters an area of interference from railway engineering south of Nailsea Court, although the remarkably conservative parish boundaries preserve the line of the pre-railway stream courses (Fig 3). It then emerges to the NW of Kenn Moor Gate, and enters Kenn Moor proper.

From this point until it reaches Nailsea Wall at ST43906930, the river has been engineered into at least three different courses in the post-medieval period (see below) (Fig 4). In this area, the water takes on the black colour of the underlying peat, although this may be a relatively recent phenomenon.

The fate of the Kenn River beyond this point to the sea at Sutte Pill in Clevedon parish, where it again becomes the parish boundary, between Kingston Seymour and Clevedon, will be detailed in Who made the Kenn River? (Part 2: Nailsea Wall to the Severn).

Land use and geology

The Kenn River at all points along its course is part of the immensely complicated drainage systems of south Nailsea and the Northmarsh. This means not only does it entirely feed a separate waterway (the Little or Yatton River) (see front cover Illustration), but also forms part of the drainage, and in summer, during periods of high-water penning, wet fencing and animal water supply of Kenn Moor and the Northmarsh.

The stream / River lies entirely in the riverine alluvium to the south of Nailsea (although it hugs the south side of the complex Coal Measures of that island), before emerging into the peats of Kenn Moor at a point NE of Kenn Moor Gate, where its course(s) are heavily influenced by the history of the Moor itself.

The report was written in Libre Office 5 Writer.

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Historical & archaeological context

Backwell Common to Backwell Lake (see Fig 1)

River-names are a constant source of frustration to historians. Many (including the Kenn) in the West Country and elsewhere, are held to be pre-English in origin. Ekwall (for example - 1960: 271) holds the name of the village of Kenn (*Chent* in DB 1086) to be derived from the river-name, seeing in this a name similar to the *Caint* in Anglesey, meaning something like 'the winding one'. Although the Kenn does not look very 'winding' in its modern form, it seems to have been much more so in its pre-engineered form (see below).

There must have been a 'proto-Kenn' running south of Nailsea Island, hence the corridor of riverine alluvial clays running from the region of the east of Nailsea, where the Land Yeo is notable (Gardner 1998: Plate 'Backwell Mill site'), to run out in the peats of Kenn Moor NE of Kenn Moor Gate. This corridor runs between areas of Coal Measures on Nailsea island and the slightly higher ground of Backwell Common, both of which have coal-mining histories.

Unfortunately, this area has not attracted much geological attention, so the details are unknown: extended cultivation has also put the area beyond the ability of lidar to fathom.



Fig 5: Backwell Common area in 1810 (OS first draft)

In the Backwell Common area, the OS 1st draft of 1810 shows a stream running towards Backwell Bow (Fig 5), and looping behind Brook Farm, as at present. The map is ambiguous as to the existence of the bridge at Backwell Bow: from its structure, this bridge could date from any time in the first half of the 19th century.

However, below the Bow, the map shows the line of the stream much as today: it

currently forms the Nailsea / Backwell boundary. Nailsea (and Flax Bourton) were elements of the huge manor of Wraxall until 1811, and the stream would have formed its boundary with Backwell, too.

Also note that the parish boundary is unambiguously on the north bank of the stream, leaving it (with its attendant maintenance costs) in Backwell (Fig 7).



Fig 6: Backwell Lake when relatively new (1982) from Nailsea Station

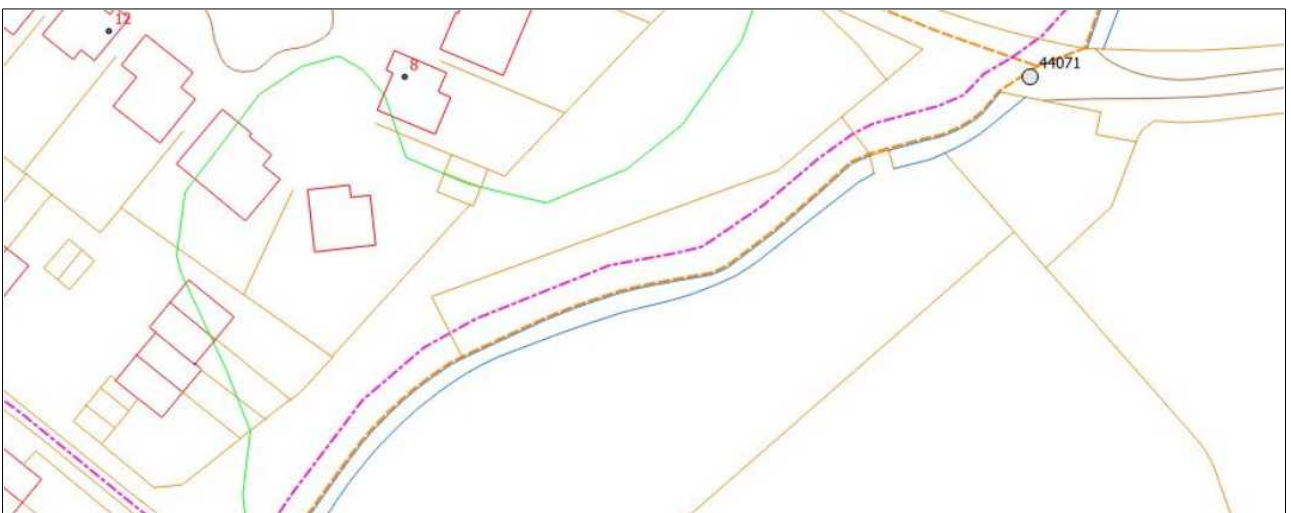


Fig 7: Stream and parish boundary (orange dashed line) SW of Backwell Bow (numbered 44071 on map)

The fact that the boundary follows the stream probably implies the stream course is early, or even natural. Unfortunately, no early parish or manor perambulations or charters (with one or two exceptions) survive in North Somerset, so there is no unambiguous documentary proof of this.

The stream and parish boundary run together until they reach ST47886956, where they part company. Subsequently, the stream today runs south along the eastern side of the causeway north of Nailsea Station. The parish boundary, however, runs straight on (see below).

The causeway does not seem to have existed to appear on Donn's map of 1770 (Fig 8 below), although how much credence can be placed on this small-scale map is unclear. It does appear, however, to show an untroubled stream running from Backwell Bow to Chelvey without hindrance.

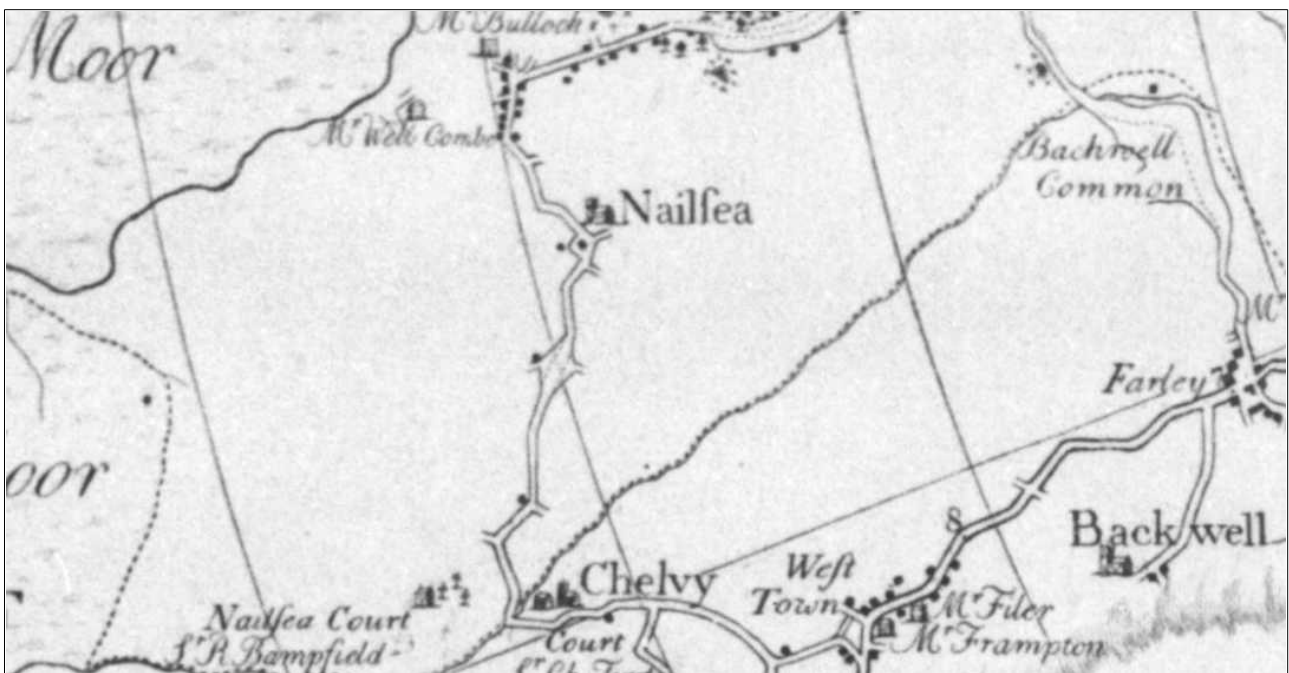


Fig 8: Kenn River from Backwell Common to Chelvey (1770)

The causeway is indisputably in place by the time of the Backwell Tithe Map of 1843 (Fig 9 below): the right-angle bend which the stream takes to follow the causeway is indicative (and see below).

Few of the causeways / walls in the Northmarsh are accurately dated. Gang Wall in Yatton is pre-1282 (Broomhead 2017); Nailsea Wall pre-dates 1432 (SHC DD\X\RY/4/6), but as far as I am aware, the Backwell Causeway is so far undated. It is perhaps informative that the gout permitting water to run through the causeway was not made for the Kenn River stream, but for a small local stream running from somewhere near Moorside Farm, into which the Kenn stream was turned.

On the basis of experience elsewhere, the causeway does not conform to the morphology

of accepted walls - two parallel rhynes dug, and the arisings piled between to produce a long earthwork, the whole often adopted to separate two areas of drainage. Against this must be weighed the presence of a thriving coal industry in Nailsea: its products (especially before the Bristol and Exeter Railway was constructed) had to be conveyed somehow: perhaps the causeway was the result of righting a wet alluvial crossing between Backwell and Nailsea (as Tickenham Cuaseway was stated to be (Collinson 1791 (3): 172).

Backwell manor was largely owned by the Rodney family in the medieval period, and by various stages ended up purchased for the Thynne family in 1710 (Collinson 1791 (2): 313) (or 1698 - Clarke et al 2012: 161). Neither family are particularly renowned for their philanthropic acts, so the origins (and date) of the causeway are still unclear.

Backwell Lake to Chelvey (see Fig2)

The line of the Nailsea / Backwell boundary continues west at the foot of the slope of Nailsea island, while the stream turns south.



Fig 9: Separation of stream and parish boundary

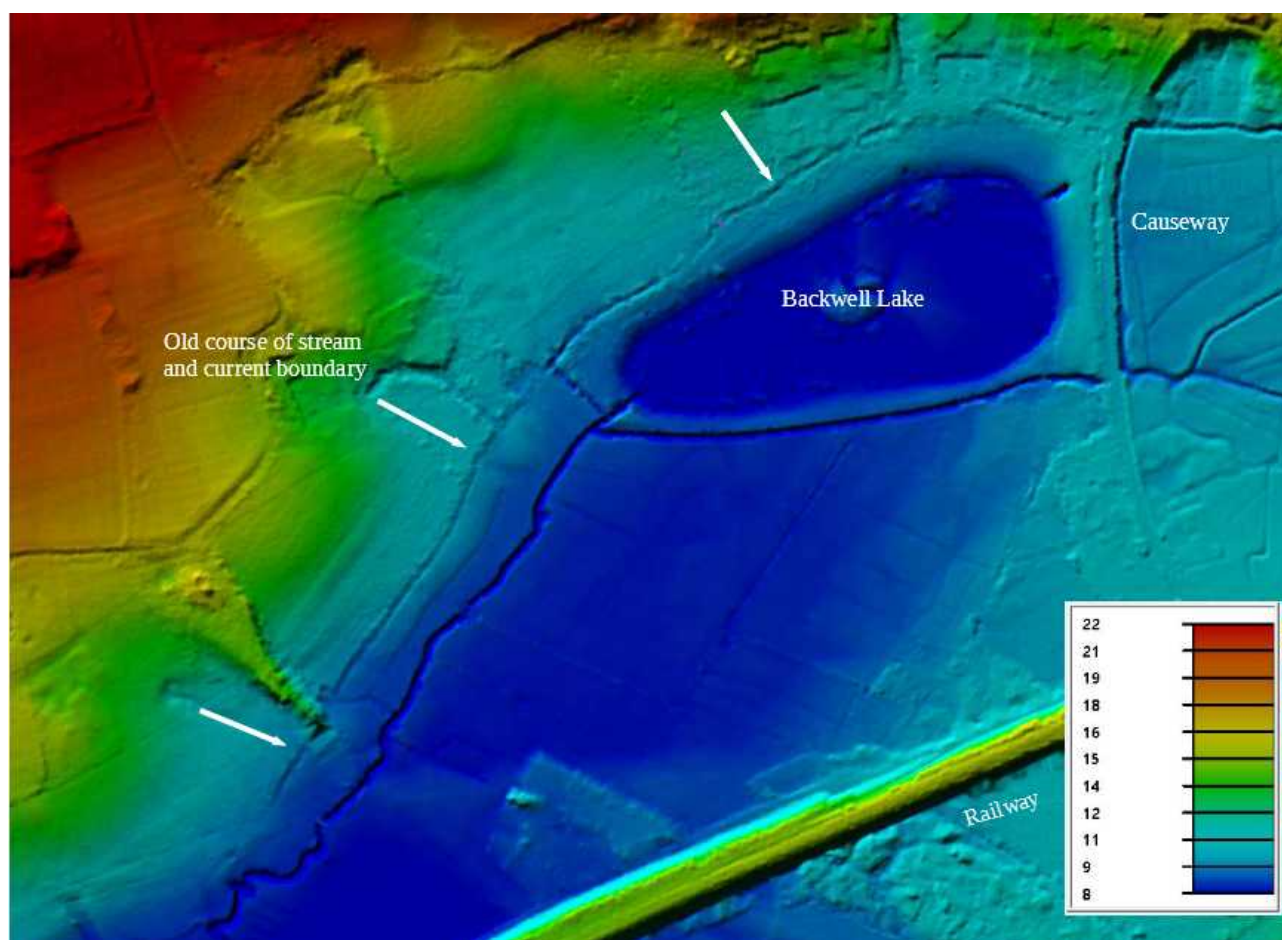


Fig 10: Old stream course and current parish boundary north and west of Backwell Lake (scale in m above AOD)

This visible continuation of the stream course as a linear hollow was presumably cut-off when the causeway was constructed. It rejoins the 'modern' course at ST47296905, where the stream makes a right-angle turn towards the railway.

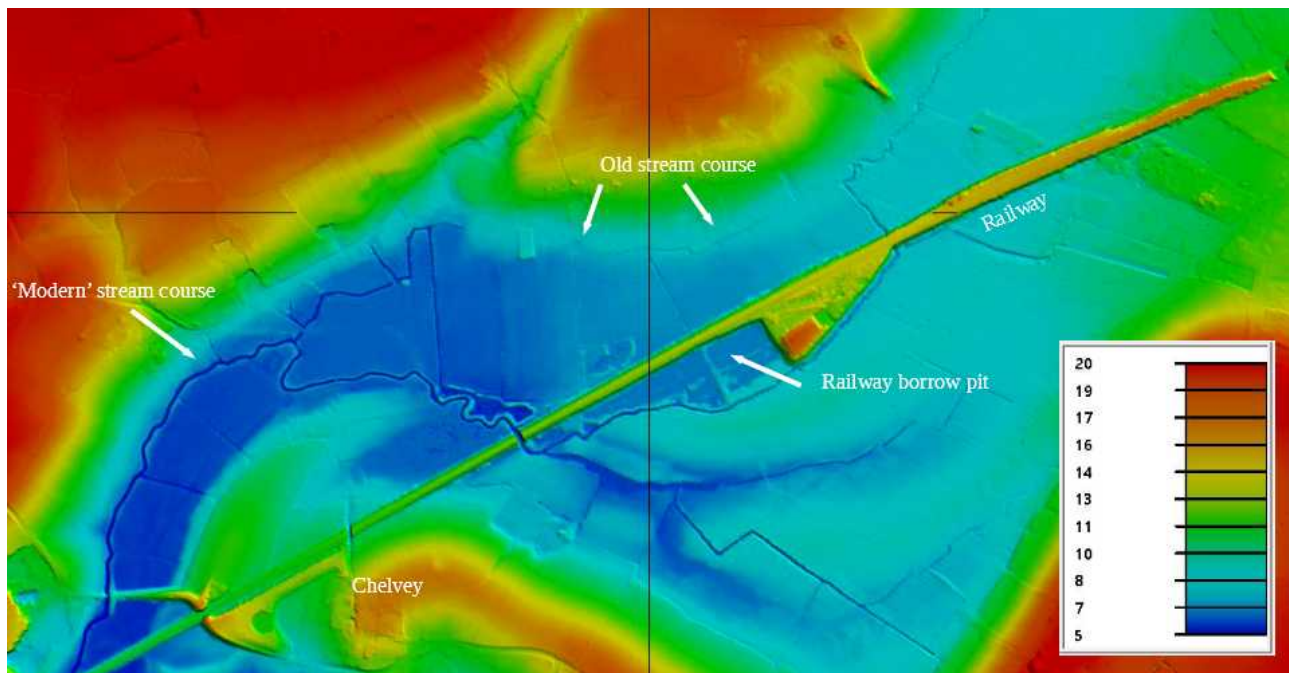


Fig 11: Stream courses N of Chelvey

Beyond that right-angle turn, an old stream course (though not a parish boundary) can be followed in the lidar data (Fig 11), which eventually would join with a currently open watercourse around ST46746898, to the west of Deerhurst Farm, which rejoins the 'modern' course N of Chelvey.

In the bottom of the valley (ignoring the disruption caused by Backwell Lake), the southern course of the stream emerges from the causeway, today running by a modern by-pass south of the Lake, and along the valley floor to ST47356897, where it encounters the railway (Fig 11).

The course then runs south of the railway, around a borrow pit (see Fig 12), and back to and under the railway at ST46806866. From here, the stream runs in what appears to be a natural course (from its sinuosity) around the higher ground of Chelvey (Fig 13), to the gates of the drive of Nailsea Court at ST46196841, passing under the road from there to West End and Nailsea Wall.

So, it is clear that what becomes the Kenn below Chelvey has one ancient 'natural' course marked by the parish (and indeed, hundredal boundary - Chelvey and Backwell are in the Hundred of Hareclive and Bedminster, and Nailsea in Portbury: Collinson 1791), and a second, possibly natural, too, south of this in the area of the later railway. This is entirely normal: 'braided' courses of rivers in flat alluvial areas were commonplace before engineering, which took place largely in the medieval and postmedieval periods.



Fig 12: Railway borrow pit in early autumn, in bend of Kenn stream at Chelvey



Fig 13: Kenn in natural course north of Chelvey, looking west

Chelvey to Nailsea Wall (see Figs 3 & 4)

The area to the south of Nailsea Court is affected by the construction of the railway, but luckily, the Tithe Map seems to have been finished first, and the corridor of the railway added later, so the original layout of the stream is still viable.



Fig 14: Stream south of Nailsea Court from Nailsea Tithe (1844)

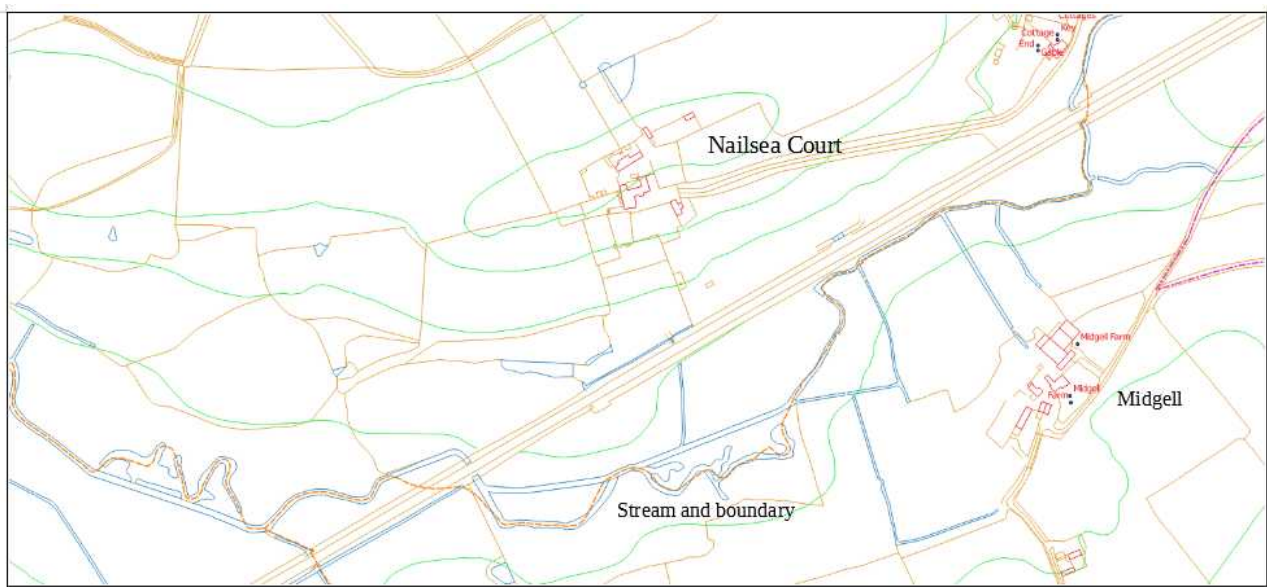


Fig 15: Area south of Nailsea Court today (2009)

The cartographer of the Nailsea Tithe Map (Fig 14) has clearly had a rush of blood to the head: he has managed to mis-name Brockley as 'Beverley'.

One notable difference about the stream here is that the boundary seems to run down its centre, unlike previous areas. (Collinson 1791 (2) 317): ' [The Tyntes held] The manor house..a warren and a swannery' (between the 16th and 18th centuries). Unfortunately, it does not appear that swanneries left notable evidence on the ground (unlike, say, decoy pools), and it may well be that one of the apparently random gatherings of swans seen in the Northmarsh was enough to refer to a site so (see Fig 16).



Fig 16: A ?swannery on Kewstoke Moor, winter 2021-22



Fig 17: Old watercourses being infilled June 2005

Swans do welcome open water, and it is quite possible that the swannery at Chelvey was in the area south of Nailsea Court.

The 20th century new course is now all that is to be seen at the site, the old courses being backfilled in June 2005 (Fig 17).

The stream then recrosses the railway at ST45516791, and is met by a small tributary emanating from the vicinity of Litlewood Cottage, east of Lower Claverham.

Just beyond this point, the stream enters the peats of Kenn Moor, and the ensuing complexities show how we can never take the line of current watercourses for granted.

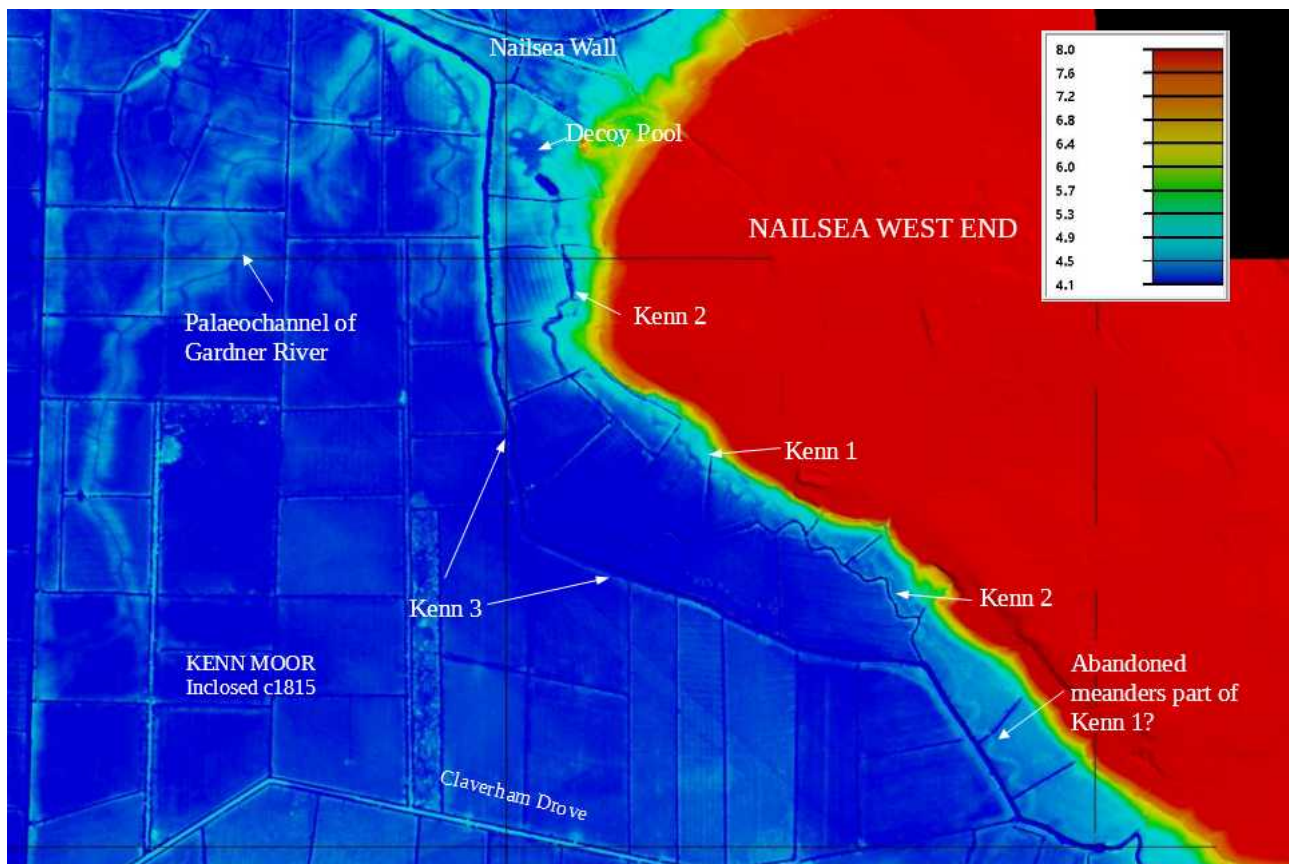


Fig 18: Overall development of Kenn River at Kenn Moor, south of Nailsea Wall (scale in m AOD)

The initial phase of the Kenn at Kenn Moor seems to be Kenn 1 (Fig 18). From what can be seen, this is a naturally developed, sinuous catchwater drain for water running off Nailsea island, and taking it north, possibly to join the Gardner River, an abandoned palaeochannel on Kenn Moor, whose already silted course was used to provide a 'foundation' for Nailsea Wall in the medieval period (see 'Who made..' part 2).

Incidentally, it is worth pointing out here that the reason abandoned watercourses are now slightly higher than their surrounds, is because the old watercourse relics consist of silts, while the surroundings are of peat, which oxidises and shrinks, leaving the old watercourses higher: a similar effect (but much greater) results in the *roddons* of the

Fens.

Kenn 1

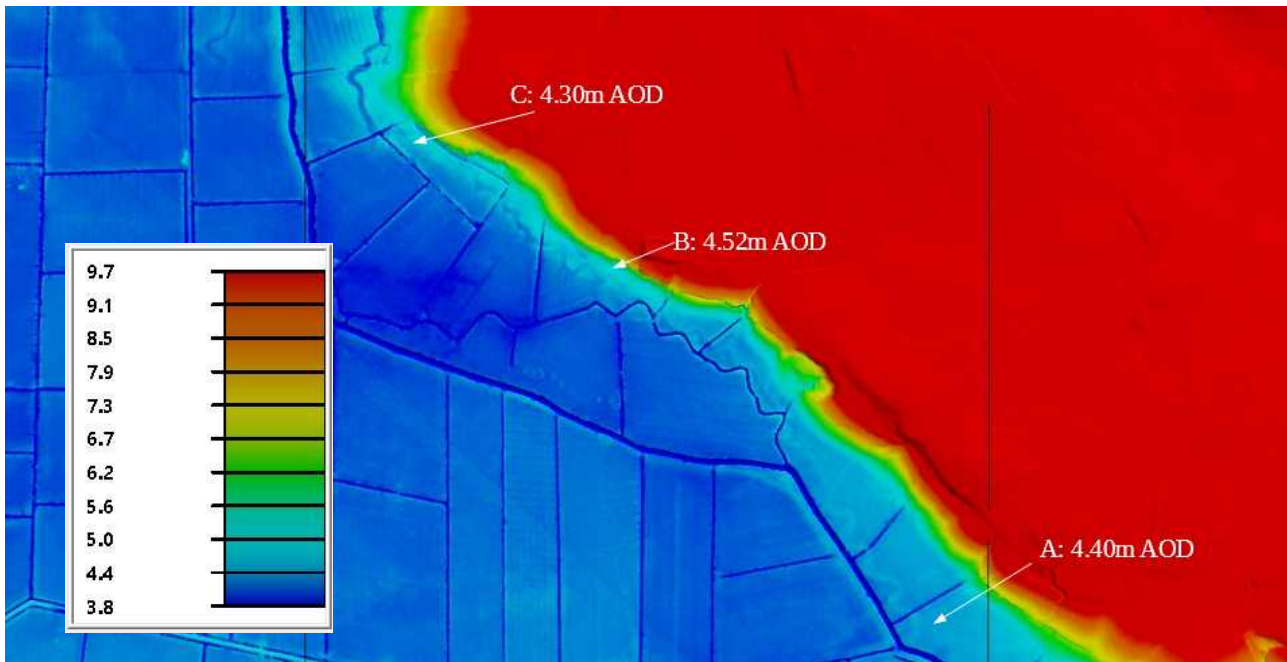


Fig 19: The line of Kenn 1, with current heights above Ordnance Datum

The apparent first Kenn on the site (Kenn 1) is today level (4.40 ± 0.1 m AOD): it may have sloped slightly more towards the north while in use, but such subtlety is unfortunately lost in the peat shrinkage of the Moor. Kenn 1 has a very high SI (c1.3) and as such, looks to be entirely natural, presumably developing during the Holocene as a response to run-off from Nailsea island.

Some parts (A) now only survive as remnant raised silt bands: others are still visible as slight linear depressions (B and C) (Fig 10).

Kenn 2 (south)

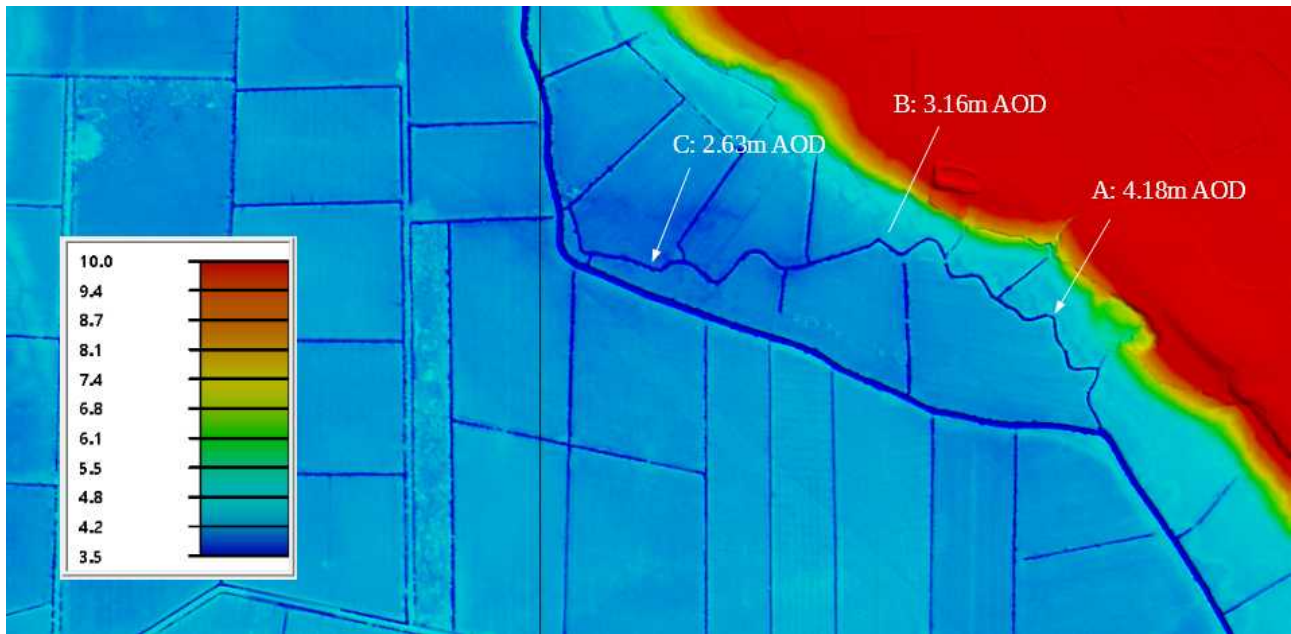


Fig 20: The line of Kenn 2 south, current heights above Ordnance Datum

Kenn 2 (south) and Kenn 2 (north) are held to be part of the same feature on stratigraphic grounds (i.e. both are later than Kenn 1, and both are earlier than Kenn 3). It is possible that they represent two separate phases, but for the sake of argument they are held here to be one.

In this case, there is a clear fall in heights from south to north, but this might be expected from a ditch group that is essentially still in agricultural use.

One potential flaw in this argument is that the area of Kenn 2 south is recorded on a map of c1780 in the Somerset Heritage Centre (SHC DD\PT/H452/42) (see Fig 21), whereas Kenn 2 north is not (but see also below).

The 1780 depiction refers to the line of Kenn 2 south as the 'Antient' channel of the river. We should be careful not to bring present prejudice to bear on this description: in most pre-modern documents, 'ancient' just means 'old', i.e. 'it's been there a while, but we really don't know how long'.

This area is a mystery, too in that it belongs to Kenn, to which is attached by a strip of land that is really no more than a drove. Presumably, some feature of the area was felt to be important enough to retain (Wickeral Wood, perhaps?). Whatever this was, the area has since been subsumed into Nailsea, and the parish boundary now runs along Kenn 3 (see below).



Fig 21: 'New' and 'Antient' channels of the Yeo (Kenn River) 1780 (north to left)

Kenn 2 north

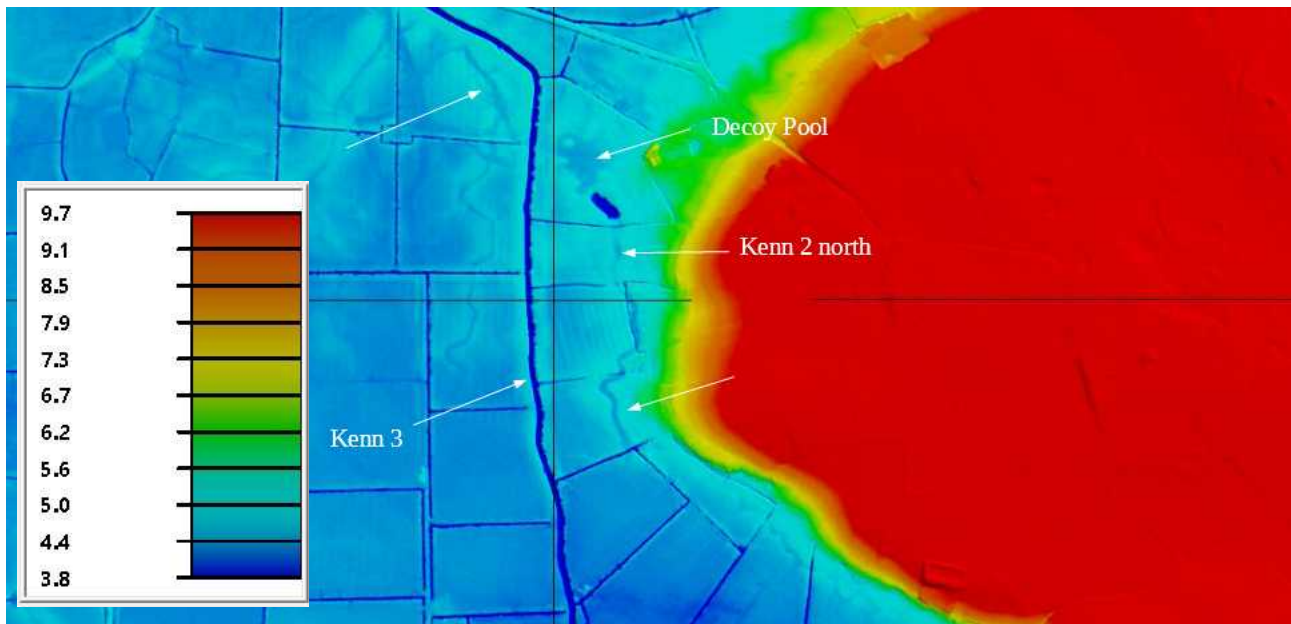


Fig 22: Kenn 2 north (with remains of decoy pool)

The second part of Kenn 2 (north) is visible on lidar from around ST44196878, and a modern ditch still follows part of its line north from there.

There are some faint indications on lidar images that Kenn 1 may have connected with Kenn 2 north at around this site, but they are insufficient to be sure.

One intriguing aspect of the Kenn 2 north is that it feeds a short-lived decoy pool close to Nailsea Wall. This featured on the 1810 OS first draft map, but more clearly on the Greenwood map of Somerset in 1822 (Fig 23). It can also be clearly seen on the lidar images (Fig 22 above). It appears to be (from the lidar) a later decoy, with a central island, of a type that became fashionable after firearms became more available, and duck-shooting a recognised 'sport'. It had gone (or was ignored) by the time of the Tithe Maps.

It is also noticeable that Kenn 2 does not join Nailsea Wall at the same place as the later Kenn 3: its former course is recognisable most years as a lush mark of a palaeochannel in the field west of the old decoy (Fig 24), across the course of Kenn 3, and is arrowed on Fig 22.

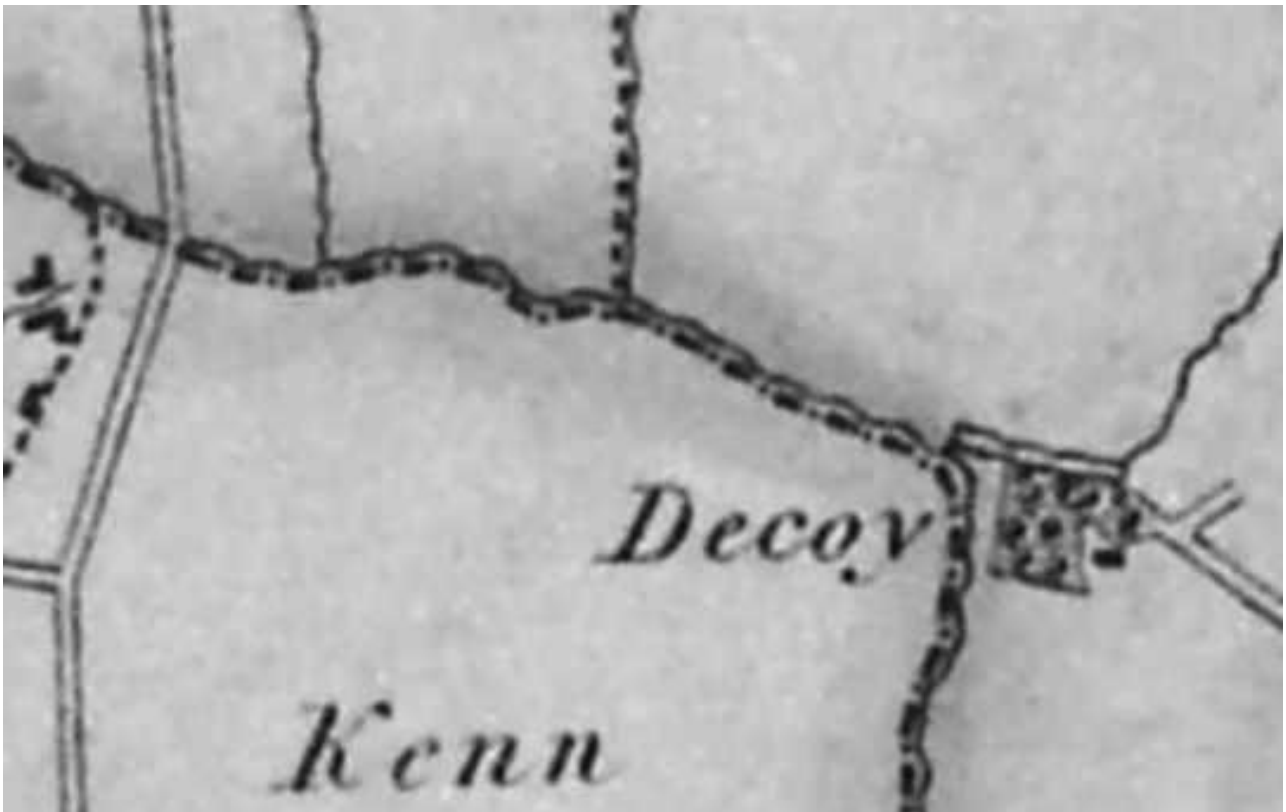


Fig 23: Kenn 2 north and decoy pool, as depicted on Greenwoods map of Somerset (1822)



Fig 24: Former course of Kenn 2 north, showing as green crop marks in summer 2018

Kenn 3

This seems to be the most straightforward of the braids of the Kenn River in the east of Kenn Moor. The channel is of identical width (and as far as can be seen) depth along its length; it has an SI of as near as can be to 1.0; it cuts through the course of Kenn 2, and executes a smooth turn to follow Nailsea Wall.

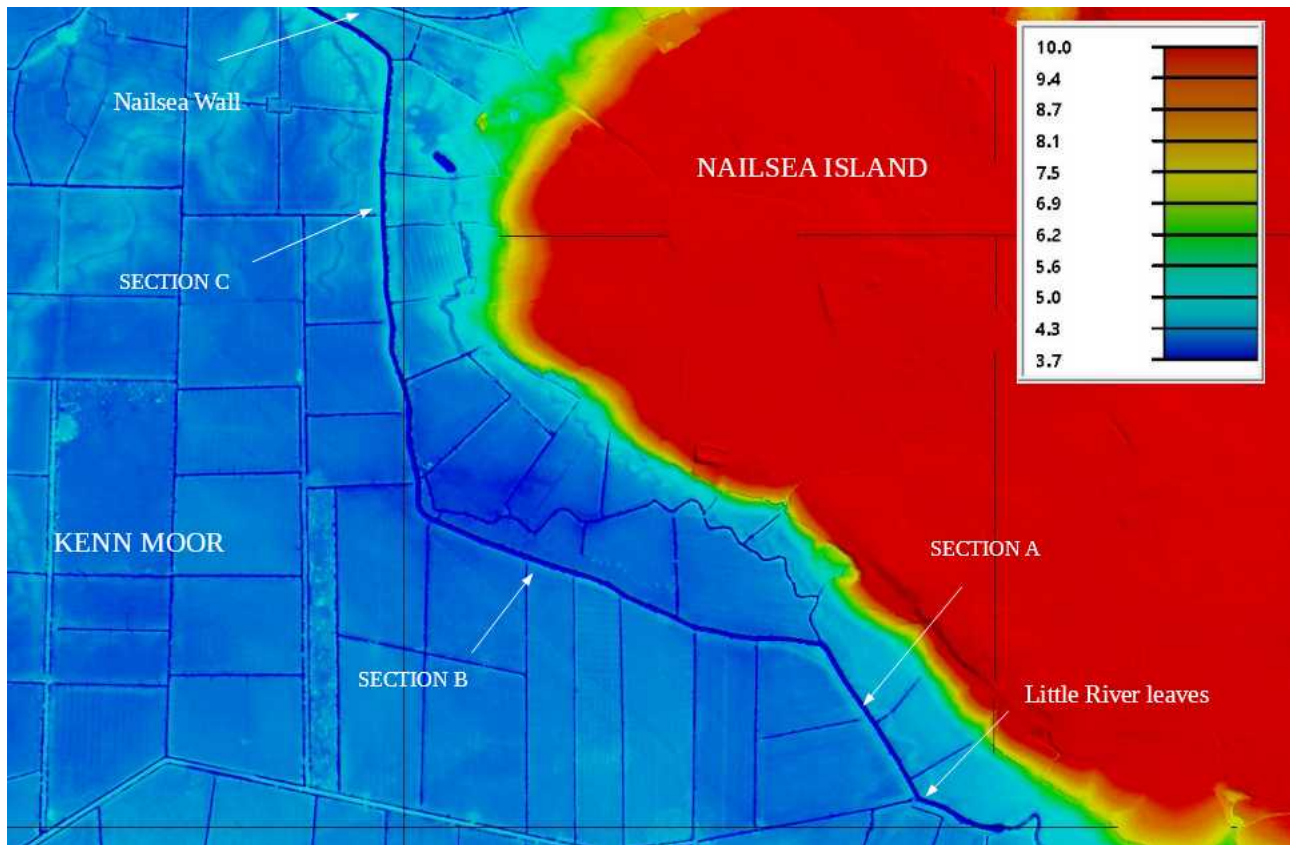


Fig 25: Kenn 3, from Sluice Stile to Nailsea Wall

The Kenn 3 is known to have been in place by 1780 (see Fig 21 above) where it is described as the 'new' channel, consistent with both its stratigraphy, and the isolation of a fragment of Kenn parish (almost, but not quite, an exclave). Having said that, 'new' can mean any age - the 'New Cut' a canalised section of river in Clewer, near Wedmore, is so-called because it was only constructed in 1317 (yes, 14th century).

The 'New' channel here is, though, in contrast to the 'Ancient' Channel that must have come first in the sequence.

This version of the Kenn (3) was also regarded as the appropriate eastern edge of the area of Kenn Moor inclosed in 1815: the fields on the east side of the Kenn are not included, although they included to be reckoned in Kenn as late as the Tithe Map.

Earlier references to *'..Right to Repair ye Wall belonging..Kenn..in Kenn Moore..'* (ellipses caused by rips in page), apparently from 1708, presumably refers to works along the Kenn, but where is not clear (SHC D\RA/1/2/124). There does not seem to be any sign of

this wall on lidar images, but if the bank were composed of peat, not clay (as might well be the case if it was on the Moor), it would be unlikely to survive even the lightest cultivation.

Further references to this elusive Kenn Moor Wall occur in 1672, 1708, 1754 and 1767 (SHC D\RA/1/2/124), but these contain no locational clues either.

The final effect of the river engineering and different courses in this area was, for two centuries, to make the parish boundaries in the area unpredictable, if not evanescent, although we should not read too much into this, as until the OS's 'tidying-up' works in the 19th century, many parish and manorial bounds were questionable, to say the least.



Fig 26: Kenn 3: a river dug entirely in peat will inevitably develop erosion problems

So.. who did make the Kenn River?

The tendency of parish and hundredal boundaries to follow natural stream and river courses is revealing. At the time of 'crystallisation' of the parish system boundaries (roughly 11th - 13th centuries AD) very little river engineering had occurred, hence these are an interesting and useful clue to 'natural' stream courses.

In the case of Wraxall, however, the origins of the boundary may have been older. Wraxall seems to have been a minster, of which Nailsea and Flax Bourton were both daughter churches. The *parochiae* of minsters were often much earlier than those of parishes, and it is not unreasonable to expect an 8th or even 7th century date for such.

This clearly implies that where such boundaries follow our stream, *no-one* made the Kenn: it was created by Lady Nature herself. Unlike the origins of the Land Yeo (Gardner 1998), the boundary uses of the Kenn reflect this.

In other areas, such as the course(s) of the river in the east of Kenn Moor, early streams, with their topographical placing and their higher sinuosity indices (SI) (see Appendix 1) look 'natural', while later courses, further out in the Moor, with their very low SIs are definitely engineered.

While numbers of documents recording the responsibility of landowners and tenants for watercourse repairs survive (largely for the 18th and 19th centuries), so far, no document has emerged that states unequivocally 'today we started digging the new course of the Kenn on Kenn Moor' (though one will be much appreciated if it does turn up!)

It is also important to remember that the role of streams in the Northmarsh in the medieval period and later was the control of water, usually the removal of it as quickly and efficiently as possible from the low-lying lands to the sea.

It is easy for us with our 21st century environmental credentials to regret the 'loss' of wet and boggy land, but unless your farming procedure was developed to take advantage of such (as in the Fens - Oosthuizen 2016), the depressing sight of good pasture under water for months in the winter does not make for easy farming (and the disastrous floods of 2014 in Somerset should never be forgotten).

In Somerset, the major instigators of river engineering and accompanying earthworks in the medieval period were the wealthy ecclesiastical bodies (Glastonbury Abbey, the Diocese of Bath and Wells, and to a lesser extent Muchelney Abbey and some greater secular landlords) (Williams 1970): such either did not exist in northern Somerset, or their records (like those of Woodspring Priory) do not appear to have survived.

While medieval landowners may well have been involved in the creation of 'walls' in the Northmarsh, most of the evidence on the Kenn so far is that engineering happened in the post-medieval period, far later than perhaps might be expected.

Further discussion will accompany part 2 of this document.



Fig 29: Turning west: the Kenn alongside and south of Nailsea Wall

Recommendations for further work

'Who made the Kenn River part 2' will follow in due course.

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Appendix 1

Sinuosity Index

Sinuosity, sinuosity index, or sinuosity coefficient of a continuously differentiable curve having at least one inflection point is the ratio of the curvilinear length (along the curve) and the Euclidean distance (straight line) between the end points of the curve. This dimensionless quantity can also be rephrased as the "actual path length" divided by the "shortest path length" of a curve. The value ranges from 1 (case of straight line) to infinity (case of a closed loop, where the shortest path length is zero or for an infinitely-long actual path)

Rivers

In studies of rivers, the sinuosity index is similar but not identical to the general form given above, being given by:

$$SI = \text{channel length} / \text{down valley length}$$

The difference from the general form happens because the downvalley path is not perfectly straight. The sinuosity index can be explained, then, as the deviations from a path defined by the direction of maximum downslope. For this reason, bedrock streams that flow directly downslope have a sinuosity index of 1, and meandering streams have a sinuosity index that is greater than 1.

It is also possible to distinguish the case where the stream flowing on the line could not physically travel the distance between the ends: in some hydraulic studies, this leads to assign a sinuosity value of 1 for a torrent flowing over rocky bedrock along a horizontal rectilinear projection, even if the slope angle varies.

For rivers, the conventional classes of sinuosity, SI, are:

SI < 1.05: almost straight
1.05 = SI < 1.25: winding
1.25 = SI < 1.50: twisty
1.50 = SI: meandering

<https://en.wikipedia.org/wiki/Sinuosity>

In short, this index helps in distinguishing 'natural rivers, canalised rivers, and those in between. In the Northmarsh, SI is confined to the simple equation above, since in effect, there is no downslope.