

# Offa's Dyke Journal



Volume 1

Edited by Howard Williams and Liam Delaney

## Aims and Scope

*Offa's Dyke Journal* is a venue for the publication of high-quality research on the archaeology, history and heritage of frontiers and borderlands focusing on the Anglo-Welsh border. The editors invite submissions that explore dimensions of Offa's Dyke, Wat's Dyke and the 'short dykes' of western Britain, including their life-histories and landscape contexts. *ODJ* will also consider comparative studies on the material culture and monumentality of frontiers and borderlands from elsewhere in Britain, Europe and beyond. We accept:

1. Notes of up to 3,000 words
2. Interim reports on fieldwork of up to 5,000 words
3. Original discussions, syntheses and analyses of up to 10,000 words

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Front cover: Drone photograph of Offa's Dyke on Llanfair Hill, looking north (Photograph: Julian Ravest). Cover and logo design by Howard Williams and Liam Delaney, with thanks to Tim Grady and Adam Parsons for critical input.

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Volume 1 for 2019

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University of  
Chester

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# Wat's Dyke: An Archaeological and Historical Enigma

Margaret Worthington Hill

*One of the very few published articles dedicated to the investigation of Wat's Dyke, Margaret Worthington Hill's article stemming from her University of Manchester M.Phil thesis was originally published in a special issue of the Bulletin of the John Rylands Library published by Manchester University Press. Guest-edited by Gale R. Owen-Crocker, the theme was Anglo-Saxon Texts and Contexts (Worthington 1997). Her article is re-printed here with the permission of the author and with the support and permission of the guest-editor, the current editors of that journal, and Manchester University Press. This version has been revised for style (including the removal of footnote citations and the inclusion of a Bibliography) and includes new photographs taken by this journal's editors to illustrate the character of the monument at key locations mentioned in the text. The article remains an invaluable resource for those studying Wat's Dyke and it might be profitably read in conjunction with the published fieldwork and dating of Wat's Dyke at Gobowen (Shropshire) by Malim and Hayes (2008). Margaret spoke eloquently about her long-term research on Offa's Dyke and Wat's Dyke at the first meeting of the Offa's Dyke Collaboratory in Shrewsbury in April 2017 and attended the Offa's Dyke Conference at Oswestry in September 2018. In this context, it is a particular privilege to include her important study in the first volume of the Offa's Dyke Journal, thus recognizing her longstanding contribution to the study of Britain's longest early medieval linear earthworks.*

**Keywords:** linear earthwork, Wat's Dyke, Offa's Dyke Project

Wat's Dyke is a linear earthwork consisting of a bank of earth and a single ditch, a form of construction known from when people first became settled farmers with a need to enclose and defend their land and continuing into modern times (Figure 1). With such a long history of construction there are many linear earthworks in the landscape, some a few hundred metres long and some many kilometres. Their uses are as varied as their dates and sizes, but most mark a boundary the purpose of which is still clear today, for example the Bronze Age boundaries on Dartmoor separating the upland open grazing from the more intensively farmed land lower down or the earthworks which form a defensive structure across a routeway. Some are defences near the boundary of a territory; the Roman-built Antonine Wall and the Anglo-Saxon-built Offa's Dyke both fall into this category. It would seem that Wat's Dyke is also a defence along a territorial boundary, although here there is no clear historical context from which we can date its construction. Many linear earthworks are without an historical context and it is usual to turn to archaeology to provide answers to questions of 'Where is it?' 'When was it built?' and 'What was its purpose?'

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<sup>1</sup> This paper is closely based on the author's thesis 'Wat's Dyke - the southern section from the valley of the Vymwy to the valley of the Dee' (University of Manchester M.Phil. thesis, 1993). The author's work on the dyke systems began in 1979 and continues. The author wishes to thank David Hill for drawing the figures for this paper.



Figure 1: Looking south along the bank and ditch of Wat's Dyke to the east of Ruabon. Here, the linear earthwork runs through farmland to the south of Pentre-clawdd Farm and to the north of Wynnstay Park and the A539 (Photograph: Howard Williams, 2015)

In general terms it is possible to provide answers to these questions for Wat's Dyke. It appears on Ordnance Survey maps and it was the subject of a report by Sir Cyril Fox in 1934 (Fox 1934, 1955). The received view is that it is situated in the northern Welsh Marches running between the Dee Estuary in the north and somewhere south of Oswestry in the south but the exact line and its termination to north and south were not adequately resolved. As to when it was built, with no historical context it has traditionally been dated by comparison with Offa's Dyke because it is of similar size and construction. Wat's Dyke runs parallel to Offa's Dyke in the northern Marches, so, by analogy, it is believed to date from sometime between the seventh to the ninth centuries. The purpose of building such an earthwork would seem certainly to be as a boundary between two blocks of land and probably between two groups of people. In this case, if the dating is correct, it would have divided the Anglo-Saxon kingdom of Mercia and the Celtic west. There has however been some debate as to whether either of these two great earthworks was intended to be defensive. Fox stated that Wat's Dyke was not continuous but had been built only where natural features such as rivers and marshes would not serve the same purpose; that the exact southern termination was not clear; that its date was early medieval and probably pre-Offan and its purpose was as a boundary although the engineer had had some thought for defence in its siting. These conclusions were based on a surface examination of the remains of the Dyke, an examination which, by reference to Fox's field notebooks, can be shown to have been but a cursory examination in some of the areas where Fox had most doubt about its existence

(Worthington 1986). The fieldwork described below shows many of his conclusions to have been inaccurate. However Fox's description remains a valuable record of the state of both Offa's Dyke and Wat's Dyke in the early years of the twentieth century.

In the early 1970s it was clear that many sections of the earthwork which had been in good condition and clearly visible on the ground when Fox had described them were no longer standing. They had fallen victim to modern development as the urban areas extended along and across it, new roads and services cut through it and modern farming methods were having a detrimental effect in some areas. Clearly there was a need for new work to record the evidence before it was destroyed and to try to identify whether lengths had been lost in the more distant past in places along the line where had Fox declared that it had never been built. A programme of research, which came to be known as the Offa's Dyke Project, was begun in 1971 to investigate both Wat's Dyke and Offa's Dyke and will continue for some years to come.<sup>2</sup>

A search of early reports and maps reveals that although Offa's Dyke is frequently described or depicted, Wat's Dyke is not usually mentioned.<sup>3</sup> However many representations of Offa's Dyke in the north follow the line of Wat's Dyke. The earliest known written reference to make this mistake, if it was a mistake, is Ranulf Higden's fourteenth-century *Polychronicon*, which includes a 'Description of Britain' in which Offa's Dyke is said to reach the sea between Coleshill and the monastery of Basingwerk (Collins 1988: 24–27, 49–50). None of Higden's acknowledged sources mentions either of the Dykes and it may be that he was working from first-hand knowledge of what was currently believed as he was writing at Chester, only a short distance from Basingwerk. When his 'Description of Britain' was translated into English from the original Latin and printed by Caxton in the fifteenth century it became readily available information which seems to have been taken up by many later writers and map makers. As early as 1676 the map of Flintshire by John Speed shows a highly stylized and inaccurate line for an earthwork which is named as Offa's Dyke but which reaches the Dee Estuary at Basingwerk, the accepted northern terminus for Wat's Dyke (Speed 1676). Even where later maps were drawn from original surveys the cartographers still had a problem identifying which Dyke reached the Dee Estuary at Basingwerk: if they identified it as Wat's Dyke they were unable to provide a suitable alternative termination for Offa's Dyke since it was known from Asser's *Life of Alfred* that the latter should run 'from sea to sea' (Keynes and Lapidge 1983: 71). Thus a 1720 map by Williams which shows both Dykes has the northern end of Wat's Dyke approaching the sea near Flint, where no dyke has ever been found, and the standing dyke through Holywell and Basingwerk is named as Offa's Dyke.<sup>4</sup>

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<sup>2</sup> Research directed by Dr David Hill with extra-mural students from the University of Manchester and in recent years co-directed by the present author.

<sup>3</sup> For a more detailed discussion of the maps and descriptions see Worthington (1993).

<sup>4</sup> Titled: 'A New Map of the counties of Denbigh and Flint' by Will. Williams, now John Felton. L. Senex Sculpt. Printed coloured and sold by present proprietor John Felton of Oswestry, Salop'. There is a good quality photostatic copy in Hawarden Record Office, ref PM/4/6. An original copy is in the National Library of Wales, Aberystwyth.

Some attempt was made by Thomas Pennant to set the record straight. His 1778 *Tour of Wales* gives a meticulous and almost totally accurate description of the line of Wat’s Dyke which he concludes by saying that he has felt it necessary to give such a long description as it is often ‘confounded with Offa’s ditch’ which he correctly states runs along a similar line between half a mile and three miles away (Rhys 1883: 349).

Rather than trying to reconstruct a northern terminus, he notes that Offa’s Dyke is ‘totally lost’ in the area of Mold, an observation which has now been confirmed by fieldwork. The 1795 map by John Evans seems to be in broad agreement with Pennant’s description but differs in some details (Evans 1795). It is by far the earliest map to give an almost accurate line for the full length of Wat’s Dyke and this also ends Offa’s Dyke in the area of Mold. Thus it can be seen that there was some early confusion concerning the line of Wat’s Dyke, it often being conflated with Offa’s Dyke in the north although there was general agreement that an earthwork ended at Basingwerk. In the south, although there was a strong tradition that Wat’s Dyke ended somewhere in the Maesbury area, its exact location was unknown. Before Fox it was always assumed that this had been a continuous earthwork originally, even if its exact line was not always known.

In the nineteenth and twentieth centuries the Ordnance Survey have produced a series of accurate maps which show extant earthworks including Wat’s Dyke, but because of the destruction it is represented by a highly gapped line. These Ordnance sheets were used by Fox when he examined the remains and described them and, as a gapped line was in keeping with his view of Wat’s Dyke, he accepted many of the gaps as part of the original design. It was with this background that the work began from Manchester. The approach adopted by Offa’s Dyke Project is initially to establish the exact line of the earthwork in a particular location. Thus, where Wat’s Dyke is upstanding in two reasonably close places with an apparent gap between them, there is first an examination of early Ordnance Survey maps at a scale of 1:2500 as these give very localized information and establish whether there was an upstanding monument when the map was surveyed and drawn. Air photographs, where they are available, are also consulted as these can show clearly long lengths of field boundaries which preserve the line of the old earthwork. Occasionally they also show a crop mark across an open field. If a length seen on air photographs does not appear on the maps then the length is walked in both directions to look for traces on the ground. These may take the form of a present day field boundary with a suspiciously deep ditch or high bank, or sometimes the remains of the bank can be seen only in a hedge which crosses the line and where the hedge has prevented ploughing from completely destroying the upstanding earthwork. If a crop mark can be seen on an air photograph then its position on the ground is identified. When a probable line has been located on the ground a geophysical survey is carried out using a resistivity meter to identify areas below the surface which are either drier or wetter than the surrounding area. Where these form a linear feature, either drier in the area of a former bank or wetter in the area of a former ditch, it is taken to be evidence for the Dyke. This is then tested by excavation, the diagnostic feature being the ditch which is larger than any normal field boundary ditch.



There have been 67 excavations on Wat's Dyke, all but nine by the Offa's Dyke Project, and the forty ditch sections have shown it to be of a regular form depending on the nature of the topography over which it is built. The bank is not available for examination as often as the ditch; it is the first thing to be destroyed, and as many excavations are in apparent gaps there is usually no bank left. Where the bank is upstanding the earthwork is usually designated a scheduled monument and so is protected by law and to seek permission to destroy it archaeologically, even in the name of research, is not reasonable. There have, however, been twenty-four occasions when it has been possible to examine the structure of what remained of the bank prior to its destruction for other reasons, new roads and buildings being the most frequent. As with the ditch, there is a consistent build to the bank which, on level ground, takes the form of a turf revetting wall to the front above the ditch and a dump bank formed from material dug from the ditch. In some cases there is a turf revetting wall to the rear. In a number of places where it has been tested along the length from the south to the steep slopes of the Dee/Ceiriog confluence, there seems to be a line of stone beneath the bank which may have been a way of marking the line the Dyke was to take prior to it being built. A shallow ditch, little more than a furrow, may have served the same marking out purpose in other areas. These marking out features only survive where they have been covered by the bank; if they were originally on the line where the ditch was dug they would disappear as it was excavated.

Having established the line taken by the Dyke the next stage is to make a comprehensive and objective record by completing a detailed measured survey. This takes the form of a full profile across the bank and ditch at every hundred metres. Readings for the top of the bank and the bottom of the ditch (as it appears today), together with one for the ground level to the west of the ditch, are taken at 25m-intervals between the profiles. In this way an accurate and objective view of the condition of Dyke today can be shown diagrammatically. As all levels taken are recorded as a height above sea level, the rise and fall of the country across which the Dyke was built can also be plotted together with the surviving height of the bank and depth of the ditch to give a longitudinal section of the monument. A detailed description of the Dyke and how it relates to the landscape is also written at every profile point. One of the great benefits of such a painstaking survey is the length of time it takes. As trained students move the survey along and take the readings, the writer is able to look about and assess the siting of the Dyke as the written description is prepared. Some lengths are visited many times at different time of year and are walked from both directions along the length and along both the western ditch side and the eastern bank side. Each visit reveals a new insight and, as only the present writer is preparing the descriptions, a direct comparison can be made between different lengths. The same approach is being adopted on Offa's Dyke and similarities and differences between the two earthworks can be noted.

So what has been learned from the extended examination of Wat's Dyke by Manchester students and by the present author in particular? The earthwork extends for over 62km from Maesbury in the south to Basingwerk in the north (Figure 2). The ditch is always



Figure 2: Looking south and uphill where Wat’s Dyke descends into the Greenfield Valley south of Basingwerk Abbey, Flintshire. This is the farthest north the line of Wat’s Dyke can be traced on the ground (Photograph: Howard Williams, 2019)

situated on the Welsh side of the bank. Excavation has shown that, when built on level ground, the bank averages 10m wide and the ditch averages 5m wide and 2m deep forming a barrier some 15m wide and at least 4.5m high from the bottom of the ditch to the top of the bank. Where it was built along the line of steeply sloping ground, as it is where it takes advantage of river valleys, then a different construction method was used. In these locations the natural slope of the ground is cut back to steepen it still further and the resultant earth is built into a bank downslope. In this way the earthwork appears to have a deep ditch with the minimum of effort. The steepness of the slope dictates the exact method of construction (Cookson 1979). Unfortunately this type of structure is easily eroded and is difficult to find archaeologically as so little change has been made to the natural shape of the ground surface. Fortunately the Project has excavated a sufficient number of sites to prove, beyond doubt in some areas and to provide a high degree of probability in other areas, that originally there was a continuous earthwork even along the steep valley sides where Fox, basing his opinion on surface observation alone, considered an earthwork had been unnecessary. It would seem, therefore, that the methods of construction and the siting of Wat’s Dyke show that it was designed and built as a single continuous earthwork.

As noted above, the recording of a measured survey and description has given new insights into the siting of the earthwork in the landscape. The full earthwork can be considered in three major sections (Figure 3): the southern section from the area of the River Vyrnwy to the crossing of the River Ceiriog and the River Dee; the central section from the River Dee to the River Alyn and the northern section from the River Alyn to the Dee estuary at Basingwerk. In the southern section there are long lengths of upstanding earthwork, mainly on reasonably level ground, sometimes with a visible, if now silted, ditch. Excavations have shown that the earthwork was built with a full 2 m-deep ditch and we can assume a similarly substantial bank from the size of the remains today, which can be as much as one to 1.5m high. The line lies outside the original built-up area of Oswestry. Modern development has preserved its line in property boundaries although in some cases destroying the monument in the process. It approaches the Iron Age hillfort of Old Oswestry from south and north on lines which give good visibility to the west but which would not make the best use of the natural contours of the hill itself if the hillfort had not already been in existence (Figure 4). Had the hill top not had a pre-existing circuit of banks and ditches, our knowledge of the preferred siting of Wat's Dyke tells us that it would probably have swept forward and upwards taking advantage of this natural sighting place. As it is, the line holds back, leaving the already ancient earthworks to dominate the countryside to the west. The clear line, proved by survey and excavation, continues to Esgob Mill.

There are, however, two major problems in the southern section: firstly the exact location of the southern terminus and secondly whether an earthwork was originally built along the 5 km of steep valley sides which exist in the area of the confluence of the River Ceiriog and the River Dee. The early records all show the southern terminus in the Maesbury area; the modern 1:25,000 Ordnance Survey maps place it at Maesbury Road where the last upstanding length of bank and ditch is to be seen. Fox considered the terminus to be about half a kilometre to the south of this point at Pentre Coed where discontinuous fragments can be observed along the meandering Morda Brook. He had considered and then rejected a continuation along this stream to Newbridge almost 1.5km south of Pentre Coed. On the ground there is a lane which seems to continue the straight alignment of the Dyke southwards which suggested that it continued even further than Fox ever considered; perhaps another three quarters of a kilometre could be added taking it to the point where the Montgomery Canal had cut the lane and destroyed any evidence of a possible extension of the line. These additional lengths south of Pentre Coed are difficult to prove archaeologically as for most of the length there is a modern road where the bank should be and the Morda Brook runs in what would have been the ditch. The matter would probably have had to have been left unresolved but for the fortuitous discovery of a linear crop mark south of the Montgomery canal on an alignment which could reasonably be seen as a southerly continuation of Wat's Dyke (Jones 1979) (Figure 5).

Several excavations across this crop mark have proved that a full scale ditch between 1.5m and 2m deep, and by inference a bank, had once crossed the fields, although only

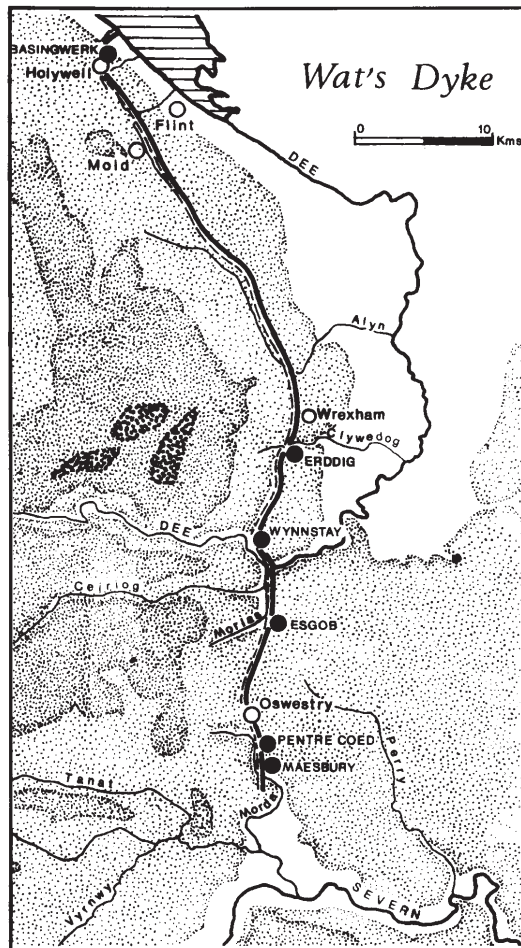


Figure 3: The line of Wat's Dyke as mapped by Margaret Worthington-Hill (after Worthington 1997).

a few lengths of modern field boundary coincide with this line. In the south the crop mark ends abruptly at a point which, on the ground, marks a slight break in slope sufficient to render the land to the south too wet to plough until recent drainage works. Since there is always a possibility that a change in geology might render the ground less susceptible to crop marks, the end of the crop mark was located on the ground and resistivity survey carried out beyond it. Although there was a clear anomaly registering across the crop mark itself, this ended at the point where the crop mark ceased to show on the air photographs. A trench was then excavated immediately south of the crop mark and, although it was extended for a considerable distance to ensure that it took in any possible change of alignment, no evidence for a ditch or any disturbance to the geology could be found. Evidence was sought for a sharper divergence from the general line. Such divergences are not found along the earthwork unless necessitated by the topography, and no evidence was found in this area. Flights over the area and field walking looked for a line further to the south and two further excavations were carried



Figure 4: Looking south along the line of Wat's Dyke towards Old Oswestry hillfort. The dyke's bank is preserved in the field boundary, the ditch is now part of the ploughed field. The shift in alignment of the Dyke can be clearly seen as it runs up to the hillfort (Photograph: Howard Williams, 2019)

out on a possible line suggested by the field boundary pattern, but all with negative results. The inescapable conclusion, on the evidence available at present, is that the earthwork finished as indicated by the crop mark. This is the last dry ground before a marshy area as the confluence of the Morda Brook and the River Vyrnwy is approached. The possibility must exist that a timber palisade was constructed as a continuation from this point although there are no known examples of such a construction on either Wat's Dyke or on Offa's Dyke. However a possible reason for a plausible terminus here is discussed below when the historical setting of the Dyke is considered.

The second problem with the southern section concerns its approach to and crossing of the River Ceiriog and the River Dee. The clear line of the Dyke finishes near Esgob Mill as the valley of the Morlas Brook is approached. The ground in the area has been seriously disturbed by the extraction of sand and gravel, possibly when the sewage works was built and by the construction of a light railway. The Ordnance Survey maps are marked with 'Wat's Dyke (remains of)' but little surface evidence remains. At two places, however, excavation has revealed the remains of a man-made bank: one excavation was on a spur of land which seems to have been at the northern limit of the modern extractive activities and the other, which also recovered a slight counterscarp bank, was to its



Figure 5: The oblique aerial photograph of a linear cropmark visible in the foreground and continuing northwards towards Maesbrook. Taken near Morton Pool, Shropshire by Chris Musson in 1984. Oswestry and Old Oswestry Hillfort are in the distance top-left (Reproduced courtesy of CPAT: Photo Number 84-c-0109)

north where the plateau met the steep valley side. There are then nearly 6 km of steep valley sides before the next excavation which proves the presence of Wat's Dyke, in Wynnstay Park. This writer has carried out extensive field work along the valley sides and considers that there is sufficient surface evidence to suggest the form of the Dyke in this section. Most of the length is made up of a plateau which gives way abruptly to the valley side: first along the Morlas Brook, then the River Ceiriog and finally the River Dee. Excavation has shown an earthwork to be present along the southern length of the Morlas Brook and similar down slope counterscarp banks can be seen in a number of places along this entire length. This is exactly the configuration that the work in the north had led us to expect. Weight is added to this identification of a built earthwork by the presence of banks running down the sides of a number of the small cross valleys which cut back into the plateau. Unfortunately the area is densely wooded and mainly used to rear pheasants all of which hinders attempts at excavation. It is hoped that a suitable opportunity will be found at a future date to test this hypothesis.

The central section from the River Dee to the River Alyn has presented a different set of problems. The earthwork is clearly visible for considerable distances and gives a very strong indication of its effective use of the topography to dominate the land to the west. It clearly follows the natural contours and so has a slightly sinuous course in places. At Wynnstay Park and at Erddig Park the line runs through country estates where there has been extensive landscaping but early maps and air photographs have established the line which has been tested by excavation (Figures 6 and 7). North of Erddig Park the line lies through the centre of Wrexham. However, it has been clearly visible into modern times and so appears on early maps and is preserved in boundaries within the built-up area. It is put to a novel use as it passes through a cemetery: here the graves are neatly aligned east/west as usual to each side of the bank but there is a series of north/south graves cut into the bank itself. The railway line has then obliterated a long length although some traces of bank can still be seen. In the northern suburbs of Wrexham, housing has encroached upon the bank but the most recent housing development has recognized its archaeological and historical importance and left a long, moderately-wide green corridor to protect it (Figure 8). Cut by the by-pass it emerges again, somewhat battered, in a solitary field before plunging through a rubbish dump and into the valley of the Alyn. Thus it is in the central section that a clear line can be followed despite substantial portions having been destroyed over the years. Excavations have shown that here, as in the area to north and south of Oswestry, a substantial barrier was formed against the western Welsh people.

From the River Alyn the northern section crosses a countryside which is deeply cut by a series of minor streams. As these run in a direction which suited the Dyke's engineer they have been incorporated into its build. Here it was first proved that the steep valley side had been scarped back and a counterscarp bank built from the spoil. Where the valley side is less steep a stronger bank was built and the remains of the earthwork in these areas are more readily visible today. More than twenty excavations have been carried

out together with detailed survey and all places tested have confirmed the presence of a built Dyke. It seems certain therefore that despite the nature of the terrain there was a continuous built Dyke. As this can be proved in the north it seems likely that future work will confirm a continuous built Dyke in the valleys of the Dee and the Ceiriog.

This précis of our present knowledge of the structure and line of Wat’s Dyke is drawn from many years of work which has involved many people for short times and a few for far longer periods. Without their efforts it would not have been possible to produce the excavated and surveyed evidence to prove the hypotheses formed from maps, air photographs and field walking. We have now answered the first question as to where Wat’s Dyke is to be found and can turn our attention to when it was built. We have no attested historical date for Wat’s Dyke, its first mention by name not occurring until the fifteenth century and so another method of dating must be sought (Palmer 1897). It has already been noted that the generally accepted date is within the early medieval period by analogy with the better attested dating of Offa’s Dyke. It would therefore seem a reasonable first step to look for confirmation of this date range by an archaeological examination of the relationship between Wat’s Dyke and other remains which are dated. However no Roman structure is known to coincide with Wat’s Dyke and so a post-Roman date cannot be confirmed by this method. There are at least two and possibly three Iron Age hillforts on its line but the surface evidence at the two certain hillforts, Old Oswestry (Figure 4) and Llay promontory fort, do not elucidate the relationship although a strong topographical case has been made above for Wat’s Dyke post-dating Old Oswestry. Even if this were taken as proof positive of a postIron Age date it does not bring us conclusively to the early medieval period. At Erddig Park, however, there are the remains of a Norman motte and bailey castle which sit atop Wat’s Dyke and so gives some support to a date of construction in the Roman or early medieval period but leaves us with a thousand years in which to find an historical setting.

It might be thought that, with so many excavations, a reasonably accurate date could be ascertained based on the artefacts recovered. Unfortunately no artefact has been found in a sealed context within the bank and those found in the ditch fill have been no earlier than the seventeenth century and often more modern than this, representing the late filling in of the ditch. The lowest levels of ditch fill are barren of artefacts. The lack of artefacts would favour an early medieval date rather than a Roman one as in the early medieval period the area was aceramic and, this far west, early medieval coins have rarely been found outside towns. The excavations have also failed to find wood or bones in sealed contexts which might have given a radio-carbon date nor have they uncovered structural timbers with the potential for either a radio-carbon date or a more precise dendrochronological date. Two attempts have been made to ascertain a date, both by experimental scientific methods. The first was from an old ground surface sealed under the bank near Buckley in Clwyd. The method depended upon the orientation of particles of iron becoming fixed in their orientation as the bank consolidated. As magnetic north changes and its changes through time are known it would be possible to fix the period in which the bank had been built.





Figure 6: Wat's Dyke south of Erddig Park looking south. The bank preserved in a field boundary and the ditch survives as a shallow depression to its west: (Photograph: Howard Williams, 2019)



Figure 7: Looking south-east along the line of Wat's Dyke where it runs along the top of the south-west-facing scarp slope above the Afon Clwywedog in Erddig Park. Here the Dyke's bank and ditch are well preserved. The vegetation has been managed by National Trust volunteers. Private properties of a Wrexham suburb are visible above the top of the bank (Photograph: Howard Williams, 2019)



Figure 8: Wat’s Dyke in the Wrexham suburbs where it now constitutes the western boundary of Wat’s Dyke Primary School. Looking north in this photo, the bank is clearly preserved beneath the hedge and fence while the ditch is broad and shallow but discernible (Photograph: Howard Williams, 2019)

Unfortunately this attempt was foiled when the samples were examined in the laboratory and showed that the bank had slumped during its consolidation. A sample taken at the same time from higher in the bank material provided a sample of charcoal which could be radiocarbon dated. That this sample would date the construction of the bank depended upon the fact that adhering to the charcoal were particles of a glassy substance which was attached to particles of partially burnt sub soil. It seemed possible therefore that the burning had taken place during the excavation of the ditch through an undisturbed subsoil, although the possibility that the ditch had been dug through a previously occupied land surface had to be considered. The results of the radiocarbon dating of this sample gave it a date within the Bronze Age, a date which other considerations such as the Dyke’s relationship with Old Oswestry and the Domesday evidence discussed below, makes unlikely and therefore the second possibility of how the charcoal came to rest within the bank now seems more likely.<sup>5</sup>

With both traditional excavation methods and experimental scientific methods of archaeology failing to date the building of Wat’s Dyke, a more detailed consideration was given to the possibility of an historical context providing an answer. This was not an exhaustive documentary search but did lead to some interesting preliminary

<sup>5</sup> This is the personal view of the present writer who was present at the excavation and taking of samples by the late, Dr A.J. Clark.

results. The earliest detailed documentary source which we have which might have a relevance to the monument is Domesday Book,<sup>6</sup> containing as it does information for both 1086 when the survey was taken and also the pre-1066 situation where this could be ascertained. This document would post-date the building of the monument if the proposed early medieval date is correct. A note in the Shropshire Domesday draws attention to the relationship of the Domesday boundary to Offa's Dyke and it is further noted that settlements which were hidated were 'therefore of long-standing English settlement'. The hidation of the land is simply a basis for calculating the tax due from the manor, in much the same way as the recent rateable values of properties, so that at any time a statement could be made that gave the amount of coin or service that was due from each hide. If we are looking for an early boundary between Mercia and Wales, therefore, we should consider the position of the hidated lands as the Welsh system of taxation was based on the *cantref* system of land division rather than hidated land and was still rendered in goods such as grain, cattle or honey at Domesday.

Wat's Dyke in Shropshire is in the hundred of Merset, which means the people who lived on the Mere or Mark, that is the boundary. Within the hundred the manors are listed with their hidation and it is possible to identify the most westerly manors (Figure 9). Maesbury is one of these manors and it is noted in Domesday that it was the hundred meeting place before this was moved to Oswestry. The first element in this place-name is probably the same as the hundred name rather than the Welsh *maes* meaning field. This would give a meaning of the *burh* or fortified place on the boundary.

It will be recalled from the discussion of the line of Wat's Dyke above that Maesbury is at the extreme southern end of the earthwork. When the other western manors are located it becomes clear that the boundary between the Anglo-Saxon hidated land and the early medieval Welsh land under Anglo-Norman control is not the modern boundary of Shropshire but is along the line of Wat's Dyke.

When a similar examination of the Domesday evidence is carried out in Cheshire the correlation between the limit of hidated land and Wat's Dyke continues to be remarkable, most hidated manors being to the east of the Dyke; the two exceptions are Hope (hidated) and the large manor of Bistre (unhidated) which are astride it, although not all places in this latter manor have been identified. What is more remarkable is that in the north the two hundreds of Deeside (hidated) and Tegeingal (unhidated) keep to the line of Wat's Dyke, leaving a narrow coastal strip to the Anglo-Saxon side as far as Fulbrook in the area of Basingwerk, the northern terminus of Wat's Dyke and, incidentally, another fortification place-name. Thus in Cheshire and in Shropshire the division between hidated land and unhidated land which is recorded as being under Anglo-Saxon control is on or adjacent to the line of Wat's Dyke.

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<sup>6</sup> All references here are taken from the Philimore editions of Domesday Shropshire and Domesday Cheshire, which do not have page numbers.

If this examination of the Domesday evidence is extended southwards in Shropshire, beyond the southern terminus of Wat’s Dyke, it can be shown that beyond Maesbury there are two manors, Maesbrook and Bausley, which are situated in line with Wat’s Dyke if its course at Maesbury is projected southwards, although, as noted above, there is no archaeological evidence that this was ever the case. Beyond this is a large block of land valued at 52.5 hides which is attached to Montgomery castle. Before 1066 it was all waste but by 1086 the northern lowland part of the area was productive and included the early timber motte and bailey castle of Hen Domen, the precursor of Montgomery castle; the southern, upland, area was given over to hunting. Offa’s Dyke runs through this block of land but it is the River Severn to the west which forms the boundary of the hidated land, not the earthwork. South from this block of land, however, the division between hidated and unhidated land seems to be Offa’s Dyke.

The fact that Wat’s Dyke marks the limit of hidated land in the north, when it might have been expected to be the more westerly Offa’s Dyke, raises interesting questions concerning the relative dating of the two monuments. Were Wat’s Dyke north of the River Severn and the southern part of Offa’s Dyke contemporary? What then would be the status of Offa’s Dyke north of the River Severn? Could there be some truth in a locally-held belief that the northern end of Wat’s Dyke was called Offa’s Dyke or is this simply confusion arising from the antiquarian sources discussed above? A possible northern link between the two monuments was once considered (Hill 1974) but a search for archaeological evidence between Offa’s Dyke and Wat’s Dyke in this area did not result in any support for the theory and so this particular idea has now been abandoned.

For the present we must consider the facts as we can discern them, that is that Wat’s Dyke is a separate earthwork running between Basingwerk and the Dee estuary in the north and ending near Maesbury and the River Vyrnwy in the south. Archaeologically it has been shown to be of one build as its form responds in exactly the same way to the topography over which it is built. This line can also be shown to be the limit of hidation as identified at Domesday and the hidated land is thought to mark the extent of the longstanding Anglo-Saxon occupation, the unhidated land controlled by the Normans in 1086 representing an overlordship of Welsh lands which took place after hidation. Such a situation pertains along the full length of the Welsh Marches, however, and does not therefore offer an explanation as to why Wat’s Dyke only extends for part of this distance.

If we look at the situation from the Welsh side of Wat’s Dyke rather than the Anglo-Saxon or Norman side, then the hundred of Merset in the south marches with the cantref of Cynllaith, and whilst it is generally agreed that it is almost impossible to draw an accurate boundary for the Welsh principalities at any date in the early medieval period as they are subject to rapid political change, Rees’s map shows the southern boundary of Cynllaith in the area of the River Vyrnwy (Rees 1959: plate 29). The River Cynllaith rises near Pen-y-gwely and is a tributary of the River Tanat which is itself a tributary of the River Vyrnwy.

**Hidated Manors**

- 1 Bagillt
- 2 Coleshill
- 3 Radington (lost place near Flint)
- 4 Leadbrook
- 5 Llys Edwin
- 6 Soughton
- 7 Broughton
- 8 Kinnerton (?)
- 9 Hope
- 10 Gresford
- 11 Eyton
- 12 Erbistock
- 13 Weston Rhyn
- 14 Weston Coton
- 15 Maesbury
- 16 Morton
- 17 Maesbrook
- 18 Melverley
- 19 Bausley

**Unhidated Manors**

- A Fulbrook (Greenfield)
- B Gellilyfydy
- C Calcot
- D Brynford
- E Halkyn
- F Gwysaney
- G Hendrebiffa
- H Bryncoed
- I Bistre
- J Rhos Ithel

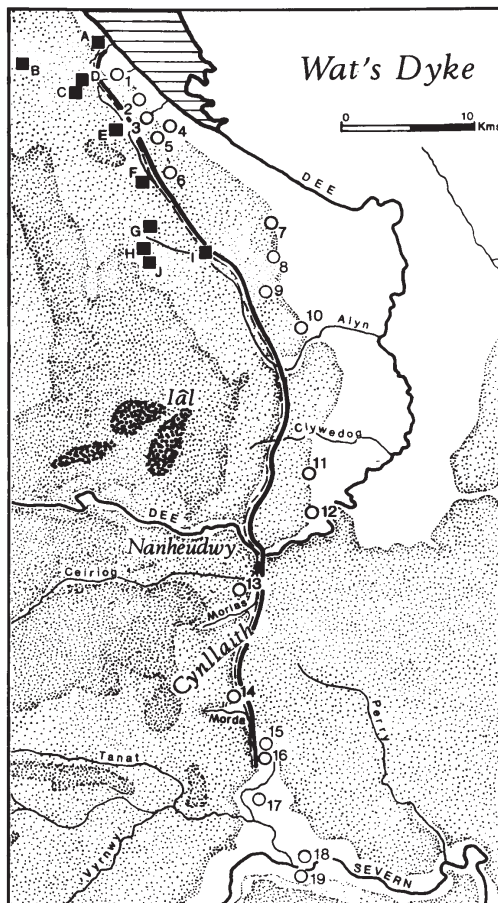


Figure 9: Hidated and unhidated manors on either side of Wat's Dyke (after Worthington 1997)

If Wat's Dyke was built at a time when the boundary of Cynllaith was significant, then the River Vyrnwy, or the marshy area to its north, becomes a sensible place for the terminus.

Cynllaith and, to its west, Edyrnion were unhidated areas which were held at Domesday by Reginald the sheriff who also held Oswestry Castle which controlled the route into Cynllaith from England. Iâl, also unhidated, was held by Earl Hugh from Earl Roger and although Nanheudwy is not mentioned by name, it is suggested that the entry at 4.1,13 refers to this block of land which stands adjacent to the hidated land in the central section of Wat's Dyke. In the north there are individual unhidated manors listed to the west of Wat's Dyke. It should be remembered that whereas the Anglo-Saxon kingdoms were clearly defined by the late seventh century, albeit with shifting borders and changes in dominance, the political units in Wales were smaller and still based on the kin group; thus the smallest unit would be the extended family group which belonged within a larger tribal grouping which in turn would be part of a confederacy of tribes represented by such principalities as Powys and Gwynedd. The Welsh areas

mentioned above therefore represent the middle type of grouping, the tribal area which is termed in Domesday Shropshire as *finis* and an editorial note explains that whilst this usually means ‘boundary, end, limit’ in its singular form, here it seems to have its plural meaning of ‘land’ or ‘territory’ where the Welsh term *cantref* would seem to be needed. Perhaps we should consider whether this was a deliberate use of the word, used here to indicate not only the area of land but also its position on the boundary, as ‘marches’ is used in English.

Thus Wat’s Dyke marks the boundary between long-standing English controlled land and recently acquired land, as indicated by whether the land was hidated or not at Domesday. It follows from this that Wat’s Dyke must have been built prior to hidation as the careful siting of Wat’s Dyke to control the landscape precludes it having been built along the edge of already hidated land. Thus we are led to seek a date for the building of Wat’s Dyke which is before the hidation became securely settled; such a date cannot be easily resolved but recent research suggests that the date is before the reign of King Offa of Mercia (Davies and Vierck 1974; Abels 1988). Domesday offers us another opportunity to study the situation along Wat’s Dyke as it also lists those manors which were waste. In the north the hidated land was productive and the unhidated land was not. However Gresford was waste. This was a very large manor of thirteen hides which seems to include Radnor and *Chespuic*. This block of waste land is between Wat’s Dyke and the River Dee and must surely represent the lands mentioned in Cheshire Domesday, where, under the hundred of Maelor Cymraeg<sup>7</sup> it is stated that: ‘King Edward gave to King Gruffydd all the land that lies beyond the river called Dee. But when King Gruffydd wronged him, he took this land from him and gave it back to the Bishop of Chester and to all his men, who had formerly held it.’ (Cheshire Domesday B.7.). Thus there is almost no waste in the hidated lands along Wat’s Dyke in the north, except for the anomalous area with which King Gruffydd was involved. There is no pre-1066 information for the unhidated areas of Bistre (except for one manor paying bread, butter and beer to King Gruffydd when he was in residence), Tegeingl and Rhuddlan and all the individual manors are listed as ‘outliers’ of these centres suggesting that we are looking at what were formerly *cantrefs* in Welsh hands. Iâl is only listed as a block of land but was waste before 1066 and it should be noted that, although listed in Shropshire Domesday, this area marches with Bistre, which is recorded in Cheshire Domesday, and Bistre was also waste and unhidated. It would seem from this evidence that, far from the Welsh raiding into England and laying it waste as is often suggested, it is only the Welsh areas which the English had laid claim to which were waste although at whose hand is unclear.

Turning to Shropshire Domesday and the southern section of Wat’s Dyke we find that, as noted above, the unhidated land is not listed manor by manor, even as outliers of a centre. The Welsh lands are given their area names only. Cynllaith, Edeyrnion and

<sup>7</sup> That is Maelor of the Welsh, compared with the area to its south and east, away from Wat’s Dyke, which is Maelor Saesneg, i.e. Maelor of the Saxons.

Nanheudwy seem not to have been waste. The most westerly hidated manors from Weston Rhyn to Maesbury were all waste at the time of King Edward (pre-1066) but have been brought back into cultivation by 1086. All the manors from Weston Rhyn to Bausley seem to have been in the hands of people with Anglo-Saxon names before 1066 but only Moreton and Maesbury by 1086, the remainder being held by un-named Welshmen. The presence of Welshmen is not remarkable as they occur in manors deep to the east of Wat's Dyke in Shropshire, but usually only as people present on land held by a Norman from his overlord. Here they seem to be holding the land directly from the overlord. Maesbury is a special case having been the head manor of the hundred and was held directly by King Edward, but by Domesday it was held by Reginald, who built Oswestry Castle. It was found waste but at Domesday it was back in cultivation by 'ten Welshmen with a priest', by far the highest number of Welsh recorded in a manor (Shropshire Domesday 4,1,11). So the pattern would seem to be that Weston Rhyn, Weston Coton and Maesbury, along Wat's Dyke, were waste in the time of King Edward although to the south Maesbrook, Meverley and Bausley which are beyond the southern limit of Wat's Dyke are productive and remain so throughout. Morton, which is the present day parish in which the southern terminus is situated, was in Anglo-Saxon hands, then Norman and is recorded as having suffered a short period of waste between 1066 and 1086.

It would seem that the situation along Wat's Dyke in the mid-eleventh century was one in which the Welsh side in the north was waste before and at 1066 but by 1086 had been brought back into production under Earl Hugh as far as Iâl. South of this, on the Welsh side of Wat's Dyke, we are without information for Nanheudwy but both Cynllaith and Edeyrnion seem to have been productive throughout although unhidated, whilst on the English side we have seen above that the manors along the Dyke had suffered during King Edward's reign but again were productive, though under Welshmen holding the land from Norman overlords. South of Wat's Dyke the situation seems to be the same settled conditions as those in Cynllaith and Edeyrnion. The difference between these two areas of Wales can perhaps be explained by the fact that, at Domesday, Shropshire was facing Powys, a strong kingdom at this time, whilst Cheshire was facing Gwynedd which was in the throes of civil war involving the same Gruffydd who had been in, and out of, alliance with King Edward. Thus the Domesday waste is indicative of differences along the English border which are dependent upon which Welsh kingdom they face. This evidence of the effect of the Welsh kingdoms would strengthen an argument that Wat's Dyke was built at a time when the Welsh were united between Maesbury and Basingwerk.

Thus the circumstances under which Wat's Dyke might have been built must be sought in a time which is prior to the hidation of Shropshire and Cheshire but when there is a single Welsh principality, or an alliance of Welsh princes, between Basingwerk and Maesbury. This principality would need to be unfriendly to Mercia and to hold the Dee estuary north of Basingwerk and control Cynllaith, Nanheudwy and Iâl. To account for the southern

terminus, the Welsh lands to the south of Cynllaith would need to be under a different control. Thus Wat’s Dyke was only necessary where the boundary between Mercia and Wales ran with unfriendly Welsh territories. The boundary between Mercia and Powys when the latter was at its greatest extent and power and before it was joined to Gwynedd in the mid-ninth century would seem to be the best possibility, that is in the seventh and eighth centuries when Mercia had reached so far west and, in view of the hidation question, probably in the earlier part of this period rather than the later.

In conclusion, the distribution of hidated and unhidated land in Domesday Shropshire and Cheshire and the Welsh areas to the west show a close correlation with the line of Wat’s Dyke. It is likely that the Dyke predated the hidation as it is carefully sited and is not an arbitrary line. That the correlation is good throughout its length suggests that it was built at a time when the conditions in Wales were the same all along its length, as the variations in the distribution of waste at Domesday clearly shows that differences could occur in England when conditions in Wales varied. Such a time of stability in Wales along the line of Wat’s Dyke obtained before 850 when Powys controlled the entire area to the west of Wat’s Dyke.

In the years after the Battle of Chester in 616 up to the death of Offa in 796, the kingdom of Mercia was strong and expanding its boundaries. In this period there were four powerful Mercian kings; Penda, who died in 655, is the earliest. However, Barbara Yorke (1990: 104) points out that it was only at the end of the seventh century that Mercian expansion westwards was at the expense of the kingdom of Powys and on this evidence Penda is too early. Wulfhere, a son of Penda, reigned between 658 and 675 and is recorded as being one of the most powerful kings of Mercia. Wulfhere is a possibility, but again, Yorke would see this as early for the expansion into Powys. Æthelbald, who was from a different branch of the Mercian royal family, reigned between 716 and 757, and would seem to be the most likely candidate in view of the date suggested for the Mercian expansion into Powys. He was succeeded by Offa who is himself perhaps a feasible alternative; his reign from 757 to 796 was certainly long enough to have completed two earthworks and he controlled a greatly expanded Mercia. It is however a little late to have been before the hidation of the area.

The final question asked concerned the purpose of the earthwork. It was a boundary certainly but its nature, with its substantial ditch and views to the west, is such as to make it also a defence. It must therefore have been built by the peoples to the east against those to the west. It is 62 km long and to date no evidence has been found for any structures which might have served as living quarters for a garrison and indeed such a thing would have been most unusual in Anglo-Saxon England in the seventh or eighth century. It would seem likely that it was built as a clear deterrent to raiding parties crossing from Wales into Mercia, a form of fighting much used by the western peoples who did not normally attempt long sieges or pitched battles but were extremely adept at guerrilla tactics. Such raids were endemic and as likely to take place between



different sections of their own people as against outsiders; it was almost a necessity as a way for the young male to prove himself. In the case of such small raiding parties, their objectives would be to capture cattle and other easily portable objects. If the raids were more centrally controlled, however, the perpetrators may have also burned crops over wide areas making it impossible for the Mercian people living in the area to continue, thus allowing the Welsh to reclaim land which they believed to be theirs by right. Under such circumstances a dyke would act as a warning that anyone crossing it was trespassing and liable to attack. It would not have prevented a determined group crossing into Mercia but it would give the local people time to raise the hue and cry and prevent them from doing too much damage - at least in theory. We have no way of knowing what the thinking was behind the construction, how well it fulfilled its intended purpose nor how long it remained in use as a barrier. It certainly seems to have been conceived as a large solution to a large problem and we might infer that it met with some success as its line remained fossilised in the fiscal arrangements along the Marches long after it would be reasonable to assume that it had a military use.

At the beginning three questions were proposed, the where, the when and the why of Wat's Dyke. We have most certainty about the first of these as the body of detailed information collected over more than twenty years has refined its course. We can hypothesise about the when and find some support for a date in the late seventh or early eighth century in the reign of either Wulfhere or Æthelbald but there is no certainty. To some extent the question of why the earthwork was built depends on the answer to the question of when it was built, but the detailed fieldwork has been able to show its continuous nature, its uniformity of design and its strongly defensive situation. For the present the matter must rest there with the hope that one day archaeology and science will find the evidence for a firm date and once more open up the debate.

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