

FLINT WALLS: A PRELIMINARY SURVEY OF WALLS IN WIVETON

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Flint walls are a striking feature of the landscape bordering the Blakeney Haven, yet there is remarkably little recorded information. This paper explores their distribution in one village, Wiveton, and examines how they were constructed, when were they built and suggests some possible uses, relying primarily on evidence drawn from field observations. Walls have been part of the local landscape since at least the 14th century, but the materials and method of construction means there has been a continuous process of repair and renewal. Nevertheless, they still provide a unique insight into local topography and organisation of the village by, for example, defining old boundaries, demonstrating how the landscape has been modified and indicating the status of selected buildings.

Introduction

Flint is widely used as a building material in villages scattered along the north Norfolk coast, not only in the construction of churches, houses and farm buildings but also in the walls that border the roads and lanes. The development of these walls probably reaches its zenith in the villages bordering Blakeney Haven and while this undoubtedly owes much to the late 19th and 20th century expansion of the area as a fashionable holiday venue and retirement dormitory, it is not the complete picture.

Although much has been published on vernacular architecture of the area, walls have been largely ignored. In the 1930s B Cozens-Hardy and others¹ speculated in correspondence on the age of walls in Cley; they were quite prepared to believe that some dated back to the 16th century, whilst recognising the lack of any supporting evidence! Nevertheless, there are local stories suggesting that the flint walls were built by prisoners during the Napoleonic wars at the beginning of the 19th century or even earlier at the time of the Armada.

Elsewhere in England, there have been studies of walls in upland regions² that show a long history of wall building extending from prehistoric to modern times. While these situations are very different from those prevailing in north Norfolk they offer encouragement by demonstrating the potential of 'walls' as a subject for study.

The present survey was undertaken as part of the BAHS's extensive study of Wiveton during the year 2000 with the objective in this survey of addressing four simple questions:

- Where are the walls?
- How were they built?
- When were they built?
- Why were they built?

Background

The setting for Wiveton, on the west side of the River Glaven facing Cley on the opposite bank, has undoubtedly had a profound influence on its development. In this it duplicates situations found at many inland sites in Norfolk where twin villages have developed and competed on either side of a river crossing. In the case of Wiveton and Cley the unique feature they share was their existence as ports with access both to the sea via Blakeney Haven and to a rich agricultural hinterland.

The position of the two churches situated in commanding positions facing each other across what was a tidal estuary bears witness to the manner in which the two communities vied with each other and displayed their wealth from at least the 15th century onwards. This pattern continues northwards with Church and Green Farms and Wiveton and Cley Old Halls and it is not unreasonable to speculate that the development of walls in strategic positions could have contributed to this display.

Methods

The methods employed in the field survey were simple: (1) observing and recording the distribution and attributes of walls visible above ground level; (2) photographing interesting features to support written notes, and (3) transferring data to maps. At selected sites a metal spike about 1 metre long was used to probe for features below ground level, such as foundations and possible rubble from old walls. To complement this work a search was made for documentary evidence for building of walls in Wiveton, and while this has so far proved inconclusive, it is continuing.

Present Distribution of Walls

The present distribution of walls is shown on the map (**Fig. 1**). This clearly demonstrates a north-south axis extending from Wiveton Hall to the Churchyard and an association with habitation and roads, the only extensions being a development in the vicinity of the Church and a wall in the north extending from near Wiveton Hall westwards towards Blakeney. The latter followed the line of a track shown on Faden's map of 1797 and on the much earlier map of 1586.³

Conversely, there are at least two locations where there are boundary walls but no buildings. One is the field on the opposite side of the road to Church Farm, but here there is extensive evidence of buildings existing in the past.⁴ The other site is the field bordered on the south-west by Mill Field Lane and to the south-east by Chapel Lane. Could the wall here be the last remnant of a boundary wall that surrounded the old Rectory demolished in the 19th century?

Along almost the entire length of the north-south axis walls are absent on the marsh side, that is the east side, of the three roads - Marsh Lane, Leatherpool Lane, and The Street, until about 100 metres north of the Church. There is much to suggest that all the area to the east of these roads was part of the common grazing land. The only exceptions to this pattern are the walls associated with Leatherpool Cottage, which was built sometime after the construction of the sluice in 1823, and a wall built in the 20th century near the cross roads at the 'Anchorage'.

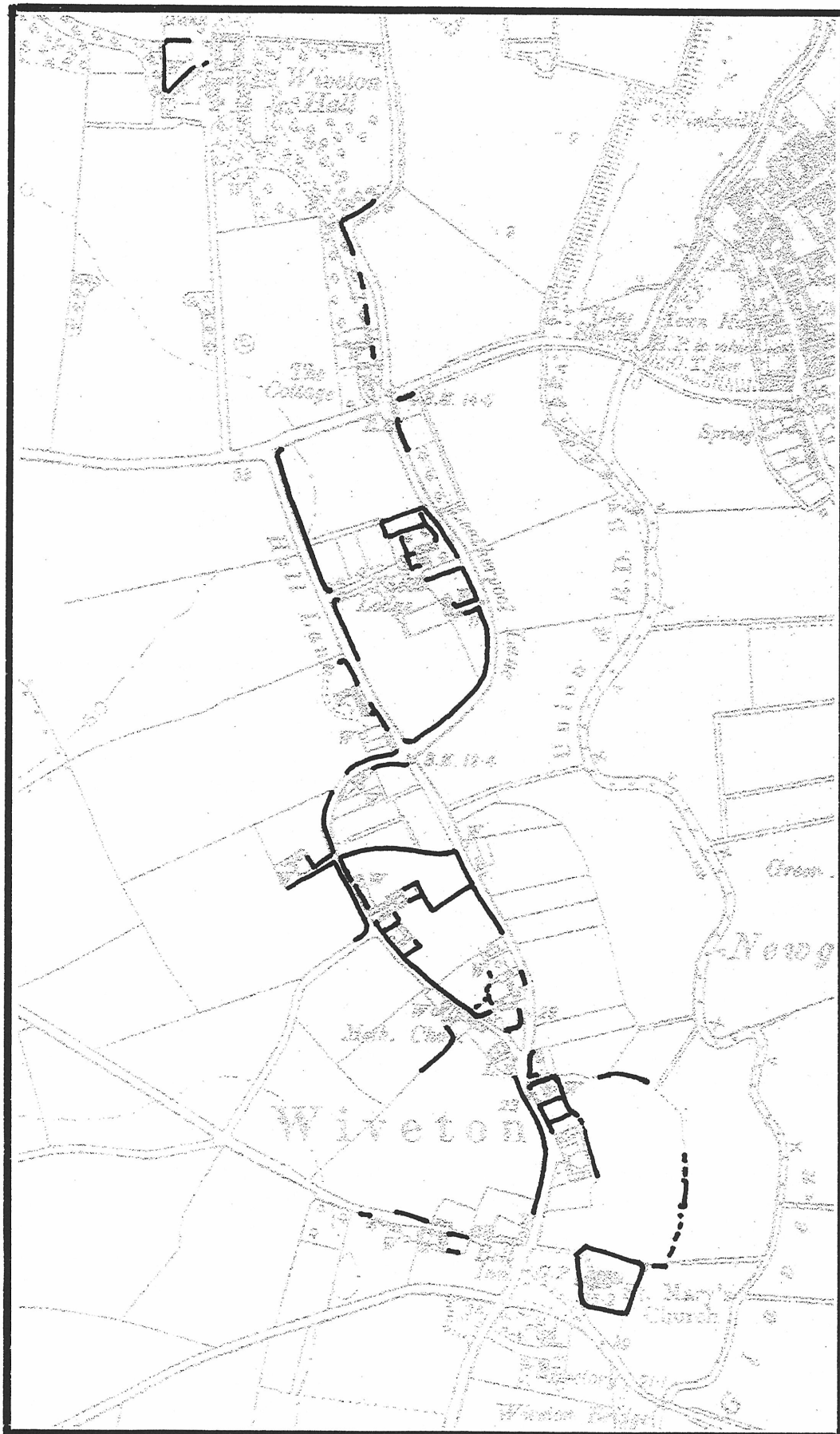


Figure 1 Distribution of flint walls

Solid black line denotes the present distribution of walls in Wiveton. At this scale it is impossible to show many of the shorter lengths of walls and the survey of some areas is still to be completed.

There are foundations of walls at Wiveton Barn on the west side of Leatherpool Lane close to position of the old shoreline.⁵ Further north on the same side of the Lane walls are absent from the last 100 metres before it joins the A149 between Blakeney and Cley. Here the survey was extended into the woodland to see if any foundations could be detected, but none were found. The lack of evidence in this area is hardly surprising given the unstable nature of the bank, while the woodland area was a cultivated field in the early part of the 20th century.

On the field abutting onto the Churchyard, known colloquially as Wiveton Quay, is a series of walls exhibiting unique features not recorded elsewhere in the parish. They suggest that this area developed either as a separate entity from the rest of the village or, as is more likely, that these are remnants of building forms that have been lost elsewhere or are now concealed in other buildings (Fig. 2). This raises an imponderable issue: how much can be understood of the former distribution of walls from the sample that remains? If loss is age related then many more of the earlier walls will have disappeared and so the bias will become increasingly serious the further back the study is pushed. However, this is not necessarily true and the loss may have been selective, for example, in the area of ‘Wiveton Quay’ after Wiveton ceased to be a port. At present, there is no immediate solution to this problem, so although caution has to be applied there is also a need to search for information from different sources, including other villages around the Haven.

On the basis of this survey Wiveton walls have been divided into five groups using position and height, not age, as the key features. This classification is used throughout this account.

1. **Low boundary walls** typically along roadsides, but sometimes extending along other boundaries. Height 1.0 – 1.5 metres.
2. **High walls**, usually closely associated with a house. Height greater than 2.0 metres and up to 3.0+ metres.
3. **Building walls** that had another function as part of a barn, shed or cottage, although most of the building has now disappeared.
4. **Retaining walls** for soil.
5. **Low walls and fragments of walls** associated primarily with the Wiveton Quay area.

How were flint walls built?

Materials

Flints and mortar are the two main ingredients of flint walls, followed by bricks and tiles, together with a range of other materials (Table 1). Sources for the first two can be found in Wiveton and adjacent parishes, but the mixture of knapped flints, dressed stone and bricks of all ages in many walls indicates that material was and still is being recycled from other walls or buildings.

Table 1: Materials found in Walls in Wiveton

Bricks	Flint cobbles or pebbles	Stones, largely erratics
Cement Mortar	Lime Mortar	Tiles
Concrete blocks or lumps	Limestone, possibly	Wood
Conglomerates	Barnack	

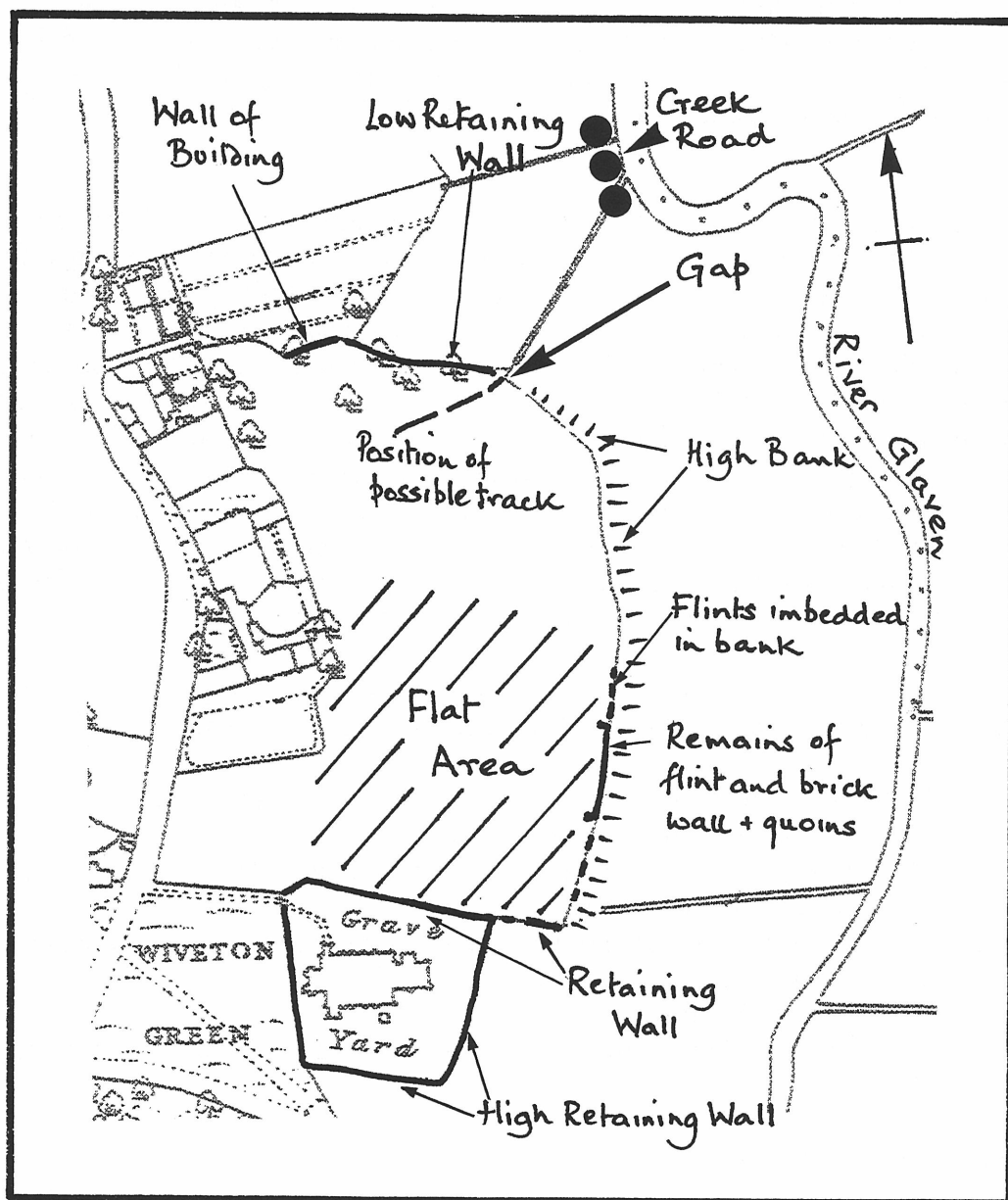


Figure 2 'Wiveton Quay'

Showing the fields known as 'Wiveton Quay' and the position of features referred to in the text.

In the past the flint stones or pebbles used in walls were known locally as cobbles and the craftsmen who used them were cobblers. The main sources for this material were the shingle spit that runs from Weybourne to Blakeney Point, the soil surface, and pits dug into glacial deposits, the pebbles from the latter being distinguished by a more angular form or ochre staining from iron salts present in the deposits. The spit has obviously been exploited for centuries and the ease of access from villages around the Haven could account for the prevalence of flint walls and cottages in the area. Nevertheless, there were attempts in the 19th century to limit the use of this resource (Fig. 3).

The other major ingredient, mortar, came in two distinct types: cement and lime, with both being used well into the 20th century. The major constituent of the former was Portland Cement, which was not invented until the mid-19th century and not widely available until much later. Its advent was revolutionary for it produced a quick drying mortar that was strong, although it needed to be imported whereas the constituents for lime mortar could be found locally.

Lime was produced by burning or heating chalk in a kiln and a possible site for this operation existed to the south of the village where the field names recorded in the 1841 Tithe documents are Lime Kiln Close and Lime Kiln Furlong. Furthermore, a ready supply of the basic ingredient, chalk, would have been available nearby where it lies close to the surface. The products from the kiln were quicklime, the active ingredient, together with residues of ash or fuel and under-burnt particles of chalk; the latter can often be seen in old mortar. This mixture was converted into a usable material by the addition of water and sand, the quicklime slaked to give hydrated lime together with the production of much heat. Typically the mixture was allowed to cool and mature, a process that could extend from days to months and even years.⁶

There is a suggestion, however, that in west Norfolk the mixture was sometimes used while it was still hot⁷ in order to give a better grip on the flints. There are also published accounts of 'hot lime' being used where expansion of the mortar would be helpful⁸ but whether this technique was widely used in Norfolk is not known.

Lime mortars can vary enormously in terms of setting times, ability to set under wet conditions and strength of the final mortar. Limes with certain impurities could set comparatively quickly even under wet conditions and without access to air: these were known as hydraulic limes. In contrast, lime produced from chalk was known as fat lime and the mortar produced required a long setting time, with the critical factors being water content and access to carbon dioxide in air.⁹ The inclusion of bricks and other porous materials in a wall would have accelerated this process by reducing the water content and aiding gaseous diffusion, while the use of selected additives, pozzolans, could change the chemistry of fat limes to give the properties of hydraulic limes.

In Wiveton both kinds of lime mortars occur. The mortar used in the majority of the boundary walls was produced from fat lime and can be readily identified by the presence of the many unburnt chalk particles and the 'softness' of the mortar. The results are walls that 'give' or move and frequently bulge without collapsing. Along the edge of the marshes at Wiveton Quay, where the conditions are damp, the lime mortar used in a low wall appears to have been a hydraulic form that has set very hard like a modern cement mortar. What additives were used to produce this lime is not known, but 1671 volcanic tarris was included in an inventory of materials required for repairing Wiveton Bridge.¹⁰

NOTICE.



WHEREAS it has been a practice for people to trespass upon the **BEACH** of **BLAKENEY** and **CLEY**, and to take away the **LARGE STONES** for their own private **Use** and **Benefit**:

THIS IS TO GIVE NOTICE,

That whosoever is found trespassing, or taking away the Stones from the Beach belonging to the Manors of *Lord Calthorpe*, or *John Winn Thomlinson, esq.*, will be dealt with and punished according to Law.

SHALDERS, PRINTER, HOLT.

Figure 3

Subtle variations in colour and texture of lime mortars can reflect slight changes in materials or proportions of ingredients used in each batch. So it is feasible to recognise 'lifts' or repairs in walls not only by the pattern of flints, but also by the mortar; a 'lift' being the amount a wall was raised before leaving the mortar to set and adding another layer of flints. In church walls the height of each lift can vary from a few centimetres to nearly a metre and it was anticipated that it would be possible to make such measurements on walls. However, much of the old lime mortar in walls is now hidden by repairs or covered by layers of new mortar and a suitable sequence has not been found.

Construction

Boundary walls were constructed of two external skins held together by mortar, with no cross-ties, and a capping or coping of flints; the coping prevented or retarded the entry of water thus prolonging the life of a wall. The two skins are parallel, not battered, and in most instances there is no differentiation in the size of stones between the foundations and the wall above. There are occasionally smaller stones in the core and this can vary between individual walls, but typically most of the space is filled with lime mortar with only a few air gaps. No walls have been excavated, so at present very little can be said about the foundations except they are not deep.

In the latter part of the 19th century and in the 20th century industrially produced tiles were also used for coping. For example, on the boundary walls of the Bayfield Estate the tiles are impressed with the date 1894 and presumably those on the Churchyard walls were from a similar period. There are no examples of clinker being used for this purpose in Wiveton, as is found in Blakeney.

Flints were laid in two basic patterns: coursed and random, with the former undoubtedly being the oldest, and some builders continued to use it in prestigious locations well into the 20th century. Coursing produced a strong linear pattern, but required stones of approximately equal size to be used in each course, although they can vary between courses. Where there is considerable variation between courses it is not clear whether this reflected availability of materials or changes in use during different periods of the wall's life; there are some excellent examples along Leatherpool Lane and in the Churchyard wall where larger stones are incorporated towards the base. In contrast, random (as the name implies) has no strong linear pattern and often includes stones of different sizes.

As noted above, the setting time for fat limes could be long, hence the potential problem of the flints settling and bulging before the mortar set. The simplest solution was to use shallow lifts and thereby reduce the weight of flints the mortar supported, besides ensuring better access for air and faster setting times, but building a wall by this method could have extended over months or possibly longer. Another solution was to use shuttering, as this would have allowed higher lifts possibly up to a metre at a time. Which method was employed in building walls or whether both were employed in different situations is not known, but it is interesting to note that a similar debate on the construction of church walls has not been finally resolved.¹¹

There are numerous signs in Wiveton that the evolution of all walls constructed with lime mortar is one of continuing decay and collapse, although probably this process has accelerated since the industrial revolution and the rise in levels of acid rain. When this occurs it does not necessarily involve collapse of the whole wall, rather a 'blister' will fall

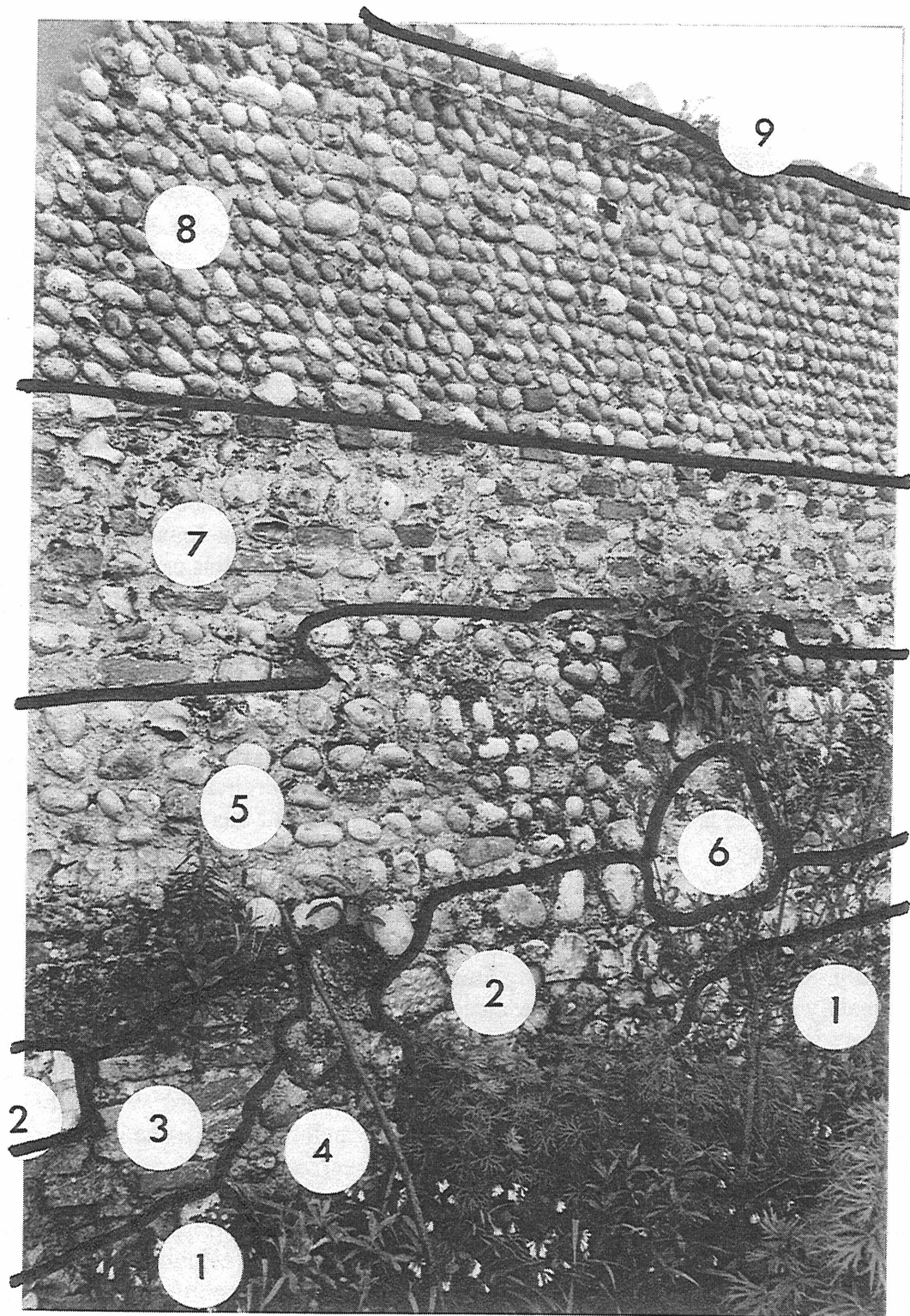


Figure 4 Flint wall complexity

High wall showing a mixture of additions, styles and repairs. Coursing is visible at different levels, with the upper (8 & 9) being probably late 19th or early 20th century additions. At the lower levels little of the base is visible, but there is a mixture of repairs using bricks and flint (levels 3, 4 & 6), and the large knapped flints (level 2) raise issues regarding possible sources of this material.

out on only one side. This can be repaired without demolishing the wall, thus confusing the vertical sequence, as the oldest part can be 'perched' near the top and not necessarily towards the base. There is an interesting example of repairs along Chapel Lane, where the patterns on the two sides of the same wall differ, one being coursed and the other random.

Brick pillars were often incorporated into boundary walls where additional support was sought and this feature was frequently used during the 20th century. However, the problem of support was particularly acute in high walls and a number of different solutions have been found in Wiveton. These include: (1) a battered wall, that is, a broad base gradually tapering to a thinner wall on top, sometimes the latter may be only two skins thick; (2) buttresses made from flint or brick, and (3) brick pillars incorporated into the wall, but often with the bricks perched on a flint base about 75 cm above the ground surface, suggesting the pillar may have been added when the wall was repaired or the height raised.

As indicated earlier the walls at Wiveton Quay (see Fig. 2) exhibit a completely different set of constructional features:

- The retaining wall along the southern edge of a high bank near the Churchyard has no deep foundations; instead there is a broad base of large coursed flints with a narrower wall built on top leaving a narrow ledge. Given that much erosion has probably occurred in this area it is impossible to determine whether the lower one or two courses that are now exposed were once buried below the ground surface; nevertheless the strength of the wall must have relied entirely on the weight of the construction.
- Similarly the walls that lie along the edge of a steep bank overlooking the flood plain of the River Glaven have no deep foundations. These walls are remnants of a building or buildings that had flint walls with brick quoins incorporating some knapped flint and a broad base formed of large coursed flints; they are now collapsing as rabbits burrow underneath and the bank erodes away.

Even though rabbits were probably rare or absent from this area when the wall was built, it must be questioned whether a building would have been located so close to the edge of a steep bank, as such a site was always liable to be unstable. It suggests that the local topography could have changed considerably since the wall was constructed.

- A low wall about 25 cm high built just above the level of the marsh has a rounded profile and appears to have acted as a retaining wall; it was built of small cobbles set in a hydraulic lime. A wall with a similar profile and function may have been constructed along a short section of the high bank further to the south, but it has been severely eroded and this interpretation should be treated with caution.

When were the flint walls built?

This is possibly the easiest and at the same time the hardest question to answer, for at the moment there would appear to be no method of ageing flint walls, nor has any documentary evidence been discovered to substantiate the age of any particular wall in Wiveton except for those built in the 20th century. Nevertheless, all the evidence suggests that the life cycle of many walls must have extended over a long time, probably centuries, as they were built, repaired, demolished, rebuilt, and raised to still greater heights (Fig. 4).

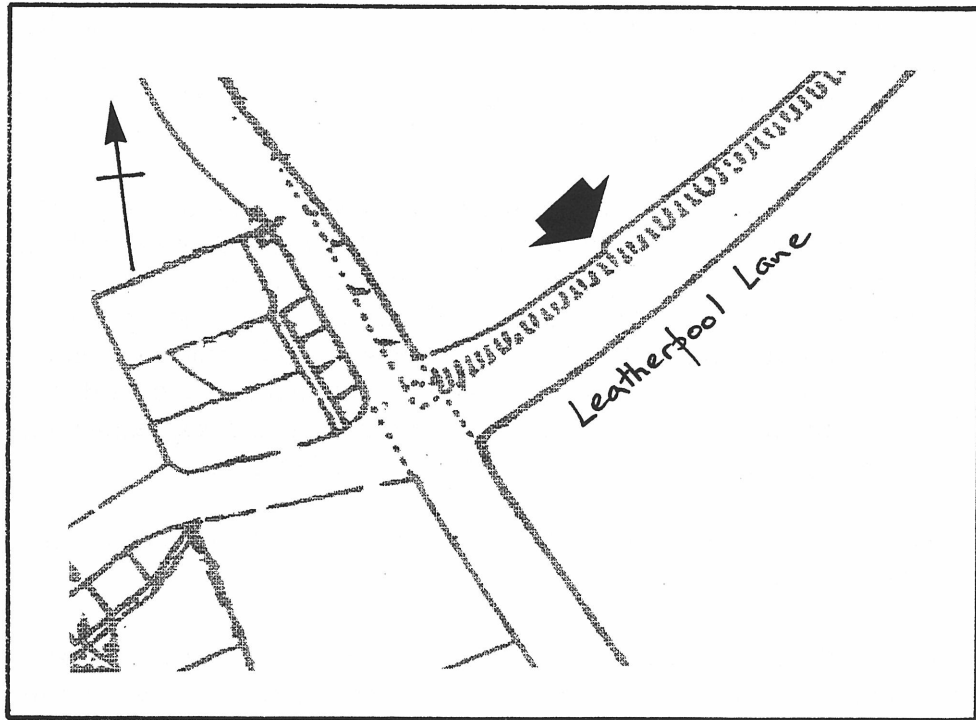


Figure 5 Offset wall

Plan of crossroads at the 'Anchorage' showing position of offset wall along Leatherpool Lane, with photograph looking west.

The wall that runs west from near Wiveton Hall towards Blakeney is the earliest in the parish for which a date can be suggested. This wall probably formed the northern boundary of the Carmelite Friary founded at Blakeney in 1296, or soon after, on the present site of Friary Farm¹² and it has been suggested that building was finished by 1321. So this wall was possibly constructed in the 14th century, even though now there may be very little if any of the original remaining as it must have been repaired and rebuilt many times during the 700 years of its existence.

The enclosing of land whether by planting hedges, erecting fences or building walls extended over centuries and is still continuing, but Parliamentary Enclosure at the beginning of the 19th century was a period of great activity. In Wiveton the areas where hedges were planted during this period can be recognised,¹³ but there is no evidence that there was a similar development of walls. However, there are one or two examples where hedges were planted on or very close to the foundations of old walls, for example, along the east side of Blakeney Road, indicating that in some instances the building of walls as boundaries predates the 1824 Parliamentary Enclosure.

The map accompanying the 1824 Enclosure Act is informative: the boundaries of small fields that existed prior to this time are characterised by curves and sudden changes in direction, while those formed under the Act have straight lines as if a ruler had been laid on the map. Much of the subsequent development of the village has resulted from building during the 20th century on the latter. As can be anticipated walls closely follow these two patterns. The following examples develop these themes further and demonstrate how difficult it is to distinguish between: (1) the age of the line or position on which a wall is built; (2) the time when the first wall was built on the site, and (3) the age of the wall existing on the site today. The three need not be synonymous; indeed it is highly probable that in the majority of instances they are not.

- i. The alignment of the older houses in the core of the village bordering on The Street and Chapel Lane suggests the roads and hence the boundary lines of these properties are extremely old. However, there are also many walls in this area that were obviously built after 1821 (when the village was surveyed for the Parliamentary Enclosure Act) but they followed the much older lines.
- ii. The boundary wall that runs between The Street and Chapel Lane at the northern end near the Anchorage was recently rebuilt on the site of a much earlier wall. This wall is extremely interesting as it traverses down the contours and is recognisable on all maps back to 1821; it also curves to follow the line of the inlet shown on Faden's Map of 1797. The area to the north and east of this wall was a bay of the estuary and houses were not built here until after the construction of the sluice in 1823.
- iii. The boundary wall near the south end of Leatherpool Lane, just before the crossroads at The Anchorage is slightly offset; this is recorded on the first edition of the 25in. Ordnance Survey map produced in 1887 (Fig. 5). Moreover, this wall was rebuilt with the same alignment after it was demolished in the 1953 flood! When such changes in alignment occur in hedges it has been suggested that they reflect variations in a medieval or even earlier field patterns, and the 1821 map accompanying the Parliamentary Enclosure Award for Wiveton shows the boundary of a small field ending at this position.

The ages of the walls at Wiveton Quay raise a different set of issues; the evidence would suggest these are the original walls as there is no evidence of rebuilding. There is also no reason to doubt that some were built at a similar period to the Church rebuilding in the 14th and 15th centuries,¹⁴ as the construction of flint walls with no foundations, a broad base and ledge would all support this or an even earlier date. However, it is possible that the walls where brick and flint are used together in quoins were built later when brick was more widely used as a building material.

Why were the walls built?

In a coastal landscape where trees were probably scarce, flint walls must have been a remarkably conspicuous feature of the landscape. So why were they built? Their uses were probably multifarious (Table 2) and this section explores a few of the ideas that need to be researched further.

Table 2: Possible uses of Walls in Wiveton

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| 1. Enclosure | 5. Stabilising soil and landscaping |
| 2. Privacy | 6. Protection from adverse climate |
| 3. Protection of property or storage areas | 7. Proclamation of status and prosperity |
| 4. Stock barrier | 8. Part of a building |
| 5. Sea defence: protection from flooding | or combinations of these |

Enclosure

With the rise of the sporting estate and increasing gentrification in the 19th and 20th centuries walls were built to define territories and increase privacy, but these overlaid still older patterns. While the latter may have been fortuitous simply reflecting the availability of building materials, their distribution would suggest otherwise. Indeed the association between walls and habitation in the core of the village, and not other enclosures, indicates that where walls were built was planned, even though the reasons why may not be immediately obvious.

Proclamation of Status and Prosperity

In Norfolk walls or fortifications were built around King's Lynn, Great Yarmouth and Norwich from the 14th century onwards. The surviving examples of these walls are massive constructions that have increasingly been interpreted in broader social terms, rather than only protection.¹⁵ This influence extended in the 15th and 16th centuries into the countryside in more modest fortified houses or castles and in barriers against invasion, as at Weybourne in the times of the Armada.¹⁶ Do such concepts have any relevance to the situation around the Blakeney Haven?

From the 14th to 17th centuries Wiveton and Cley were thriving ports, not large, but visiting English and foreign merchants or local entrepreneurs would have recognised the impact of walls associated with large churches, a friary, houses, barns and warehouses. The distribution of the walls may have been limited, but certainly such structures as existed would have imposed or reinforced an organisation and give the appearance of affluence. The same walls would have also afforded some protection for the ports, even if it were more of a psychological bluff than reality.

Protection of Property and Stock Barriers

When Wiveton was a thriving port it must have had a mixed economy, extending from farming to shipbuilding, fishing and commerce. There were possibly advantages in having boundaries that separated land used for agriculture from those areas strongly associated with commerce or fishing. The latter would have been defined by warehouses, barns and houses, but the addition of walls would have provided a more robust mechanism than fences or hedges for reinforcing such divisions and protecting cargoes, fishing gear, or fish from animals and people.

Stabilising soil and Landscaping

In a few locations walls were built to retain and stabilise banks of soil, but the term landscaped would be more appropriate for the changes around the Church and Church Farm where the local topography has been modified considerably (see Fig. 2). The present Church was built in a strategic position perched on a high bank overlooking the estuary, but the surrounding platform that forms the Churchyard is largely a man-made feature with high walls built on both the east and south sides to retain the soil infill; this is quite apart from the changes in soil level resulting from burials. On the north side the need for additional soil would have been minimal, but even here the lower few courses of the churchyard wall act as a retaining wall. Consequently on three sides the churchyard is raised above the surrounding land surface. To the north the adjacent field known as 'Wiveton Quay' was also landscaped with soil being moved to the south-east corner to extend the comparatively flat area¹⁷ and this necessitated building another retaining wall at this point.

What was the source of the soil used in landscaping the Churchyard and the adjacent field? The topography of the field suggests that the ground gradually sloped away from the Church towards the north and that a ledge was cut in this slope to produce a flat area, hence the need for a low retaining wall of less than 0.75 m along the southern boundary with the Churchyard with the excess soil being used to raise the level of the Churchyard and to contour the field. Undoubtedly these changes accentuated the visual domination of the Church, Church Farm and associated buildings when viewed from the other side of the estuary at Cley and this would have provided the motivation for landscaping. The result proclaimed the status and importance of the people who lived and traded there and, through the Church, invested in the life hereafter.

Continuing this theme: the low wall in the Quay area was also for retaining soil, but here the topography suggests that it also had another function and the clue is the absence of a wall! There is a gap between the low wall to the north and the rising bank to the south, which appears to be intentional and not a later artefact. If this interpretation is correct it suggests this was an access point for horse drawn carts from the shore, where ships could have beached and unloaded, up a gradual slope to the Church and the village. Although this is conjecture it is supported by the discovery of numerous small pieces of unburnt coal in the soil near the base of the bank suggesting this was above the level of a former tide line and was a place where coal was unloaded and dumped.

Marked on the 1821 Enclosure Map is Creek Road close to the River Glaven and its description in the text of the Award indicates that it was isolated and connected with no other road (see Fig 1). This road appears to be an enigma; what purpose could it have served in such a position, starting nowhere and going nowhere? In the course of the Wiveton study a small hole was dug at this point and at a depth of under 1m flint stones and chalk were discovered.¹⁸ Was it possible that the word 'road' was used loosely for a wide retaining wall

built along the edge of the main creek? Could this have been a crossing point for a ferry? Surely this would have been unnecessary so close to the bridge and anyway the orientation and size of the structure militates against such an explanation. So one could speculate that this might have been a mooring and offloading point for boats lying in the creek, in fact a quay.¹⁹ The position suggests such an explanation is plausible and it would have given access to the village through the gap described in the preceding paragraph, but a cautionary note: there is no documentary evidence for a quay at Wiveton. Nevertheless, if such a structure existed, could this have been it?

Tidal Defence

It has been suggested that flint walls would have prevented flooding of land and buildings by the sea during high tides or rages (storms).²⁰ Underlying such speculation are various ideas about changes in tide levels during historic times. Fortunately in the past decade geologists have been interested in changing sea levels in relation to the evolution of the Norfolk coastline. Here the important issue is the change in the *relative* sea level, being the cumulative effect of land sinking and sea level rising, rather than the absolute changes in either. The evidence is quite clear over recent geological time, that is the last 10,000 years, that the relative sea level has been rising.²¹

There are differences in the rates of change between west and east Norfolk as the whole of the UK tilts on an axis, but various estimates for the Blakeney region suggest a rate of change between 1.0 and 1.5 mm per year. Whether this rate has been constant over historic time would appear to be an open question, but there are indications that it has for about the last 500 years. So since 1500 the relative sea level has risen by about 0.5 to 0.75 metres.

This information establishes a boundary between the sea and land: a shore line or hard that ran along the base of the steep bank to the east of the church, continuing around to the area now known as the Anchorage and along the edge of Leatherpool Lane and northwards swinging around Wiveton Hall. This is consistent with Faden's map published in 1797 and the 1586 map that shows a track in the position of the shoreline. So nearly all of the existing boundary walls lie well above present high tide level. A few are closer to this boundary, for example, near Wiveton Hall, but only comparatively small pieces of land would have been protected as the ground behind is rising.

Bacon²² gives a detailed description of the walls around Terrington St Clement on the Wash in the late 16th century. The nature of these walls varied, many were simple earth banks, some were reinforced with brick and stone or even built of such materials, but they were predominately sloped walls with occasionally a protective apron. There are no surviving walls with this construction in Wiveton and the fact that Bacon indicates that the few upright walls should be replaced because they could not withstand the sea supports still further the idea that flint walls were never intended to be sea defences.

The effects of rages are difficult to estimate as the only records are verbal accounts and sometimes the veracity of these has to be questioned in light of dubious estimates made for other disasters.²³ Nevertheless, rages must have caused damage and there is evidence of warehouses being flooded in Cley,²⁴ but is there any evidence of walls being built as protection?

Protection from adverse climate

Wiveton Hall, Wiveton Barn, Primrose and Church Farms, Green Farmhouse and Welcome Cottage all have enclosed courtyards or closes surrounded by high walls that must have afforded protection from the severe weather conditions that prevailed on the north coast. There are no indications when these walls were built, but in Cley the date 1676 appears on a high wall that has been modified and repaired over many years. It is interesting that this date falls within the 'Little Ice Age', a time of climate deterioration²⁵ that continued until about 1700.

Originally these high walls could have been considerably lower and their height raised in stages over many years; some could have been built as stock barriers to ensure animals were kept close to the house or maybe excluded from selected areas, but it would also seem reasonable to speculate that they may have afforded protection to fruit trees and plants.

Gardens and orchards were certainly established in Norfolk by the 16th century and were highly developed in the 17th century.²⁶ Indeed there are records of fruit trees being purchased by Bacon²⁷ for Stiffkey in 1576. So given the presence of rich merchants living in Wiveton would they not wish to express their status and prosperity with a garden or orchard!

Conclusion

It was recognised at the outset of this project that attempting to provide answers to the four questions posed was an ambitious task and to do so within one year was impossible. So, as the title of this report implies, this is an initial attempt to draw together many disparate facts, speculate on possible answers and identify further lines of research.

So far the story appears fragmentary, but progress has been made. The general pattern for the distribution of walls in Wiveton and some aspects of their construction are better understood, although many of the answers regarding age and use are still speculative. Nevertheless, they provide some tangible evidence of the form and development of the village.

As this study has evolved the emphasis has changed from a simple survey of walls as objects to a broader canvas that considers walls in a landscape. The next stages are to: (1) complete the survey of Wiveton; (2) plot some features in greater detail; (3) extend the survey to other villages around the Haven, in order to compare and contrast, and (4) continue the search for documentary evidence regarding the age and use of walls, and the communities that built them.

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