

ENGLISH HERITAGE



An archaeological survey of the grazing marshes

Paul Pattison and Louise Barker

SURVEY REPORT

ARCHAEOLOGICAL INVESTIGATION SERIES 3/2000





BLUE HOUSE FARM NORTH FAMBRIDGE

AN ARCHAEOLOGICAL SURVEY OF THE GRAZING MARSHES

ESSEX

ARCHAEOLOGICAL INVESTIGATION REPORT SERIES 3/2000

ISSN 1478-7008

NMR INDEX No: TQ 89 NE 25 NGR: TQ 8691 9700

Report by: Paul Pattison and Louise Barker

Survey by: Louise Barker, Moraig Brown and Paul Pattison Drawings by: Louise Barker and Paul Pattison

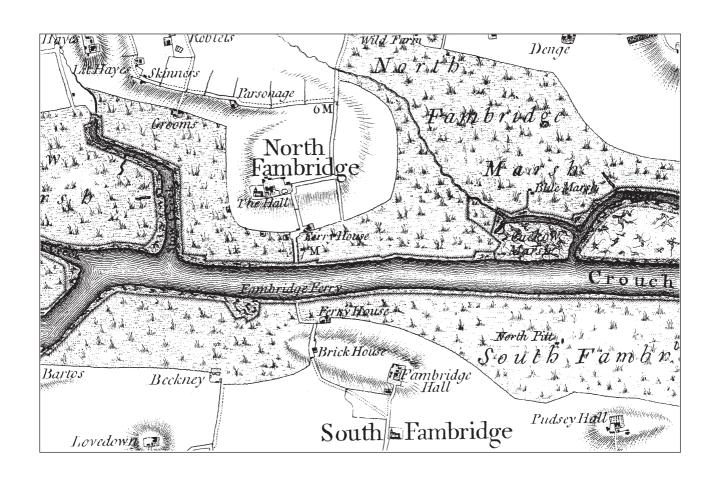
© Crown Copyright. RCHME 2000

Applications for reproduction should be made to English Heritage NMR Services:

National Monuments Record Centre, Great Western Village, Kemble Drive, Swindon. SN2 2GZ

**Tel: 01793 414600 • Fax: 01793 414606 • e-mail: nmrinfo@english-heritage.org.uk

**World Wide Web: www.english-heritage.org.uk



The area of Blue House Farm ('North Fambridge Marsh') in the late 18th century, from a map by Chapman and Andre, dated 1778 (Essex County Record Office)

CONTENTS			
1.	Introduction	1	
2.	An outline history of Blue House Marsh	5	
	History	5	
	The reclamation of Blue House Marsh	8	
	The flood of 1897	11	
	Grazing on the marsh	13	
	Salt making	14	
3.	Archaeological description and interpretation	16	
	Prehistoric land use	16	
	Late Iron Age and Romano-British salt making	16	
	Post-medieval salt making	16	
	Post-medieval reclamation and agriculture	16	
	Blue House Farm	16	
	Hyde Marsh Farm	18	
	The farm landscape	18	
	The sea wall and counter walls	19	
	Miscellaneous features	21	
4.	Conclusions and Recommendations	22	
5.	Survey and Research Methods	24	
6.	Acknowledgements	24	
7.	Bibliography and Sources	25	
LIST OF F	IGURES		
frontispiece	Blue House Farm in 1778, from a map by Chapman and André		
1	Blue House Farm: location map	1	
2	Blue House Farm: current land use	3	
3	Blue House Farm ('North Fambridge Farm'), from a map of c 1775	4	

LIST OF FIGURES (Continued)

4	Part of Blue House Farm, in Purleigh parish, from a map of 1814	6
5	Blue House Farm in the 1840s, from the tithe awards for North Fambridge, Purleigh and Latchingdon	7
6	The south western corner of Blue House Marsh, called 'East Marsh', from a map of $c1700$	9
7	RCHME survey plan of archaeological features on Blue House Farm (original at 1:2500 scale)	15
8	RCHME survey plan of archaeological features around Blue House farmhouse (original at 1:1000 scale)	17
9	Air photograph, taken in 1970, showing the central and western parts of the farm	19
10	RCHME interpretation plan showing putative blocks of reclaimed land on Blue House Marsh	23

1. INTRODUCTION

Between March and May 1999, the Royal Commission on the Historical Monuments of England (Cambridge Office, and now English Heritage) carried out archaeological field survey at Blue House Farm, North Fambridge, in Essex (NGR: TQ 8574 9695). Survey work consisted of a full ground reconnaissance of the area within the sea wall, to locate all visible sites of archaeological interest, followed by topographical survey at 1:2500 scale, anchored to Ordnance Survey digital map data. A small area around the present farmhouse, the site of yards and buildings, was surveyed at the larger scale of 1:1000. Also, basic documentary research was undertaken to provide a context for the historical development of the farm.

It was not part of the present survey to examine the inter-tidal zone, although known sites are noted below. However, the importance of the Crouch foreshore has been highlighted in a recent survey, especially with regard to prehistoric evidence (Wilkinson and Murphy, 1995).

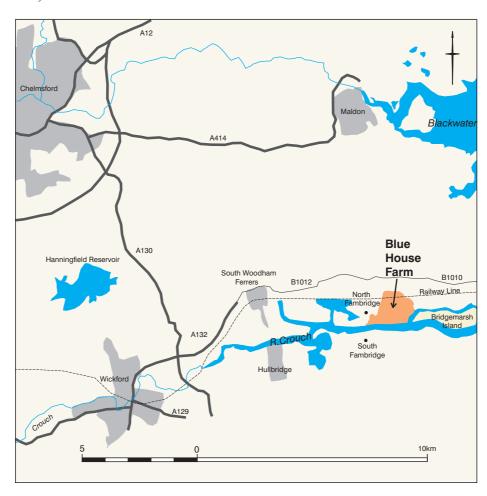


Figure 1: Blue House Farm: location тар

Blue House Farm is a holding of some 243 hectares (601 acres), mainly coastal grazing marsh, situated on the north bank of the tidal River Crouch, immediately east of North Fambridge and west of Bridgemarsh Island (Fig 1).

The farm is part of a narrow strip of land reclaimed from saltmarsh and extending along the north bank of the river. The tidal flow is held back by a sea wall along the southern side of the farm, but a substantial fleet penetrates the marsh on the west from Bridgemarsh Creek, although its extent is controlled by counter walls.

The land is generally flat at around 1-2m OD, rising very gradually to the north, then more quickly beyond the railway line. Greater elevation is achieved outside the farm in the form of a low ridge, generally above the 10m contour, supporting the road between South Woodham Ferrers and Althorne. This road is held by some to be Roman (NMR no 1043714).

The Essex Wildlife Trust have managed the site since 1998, as a working farm in a manner sympathetic to wildlife, for the most part as grazing marsh with only a small amount of arable. The entire farm is a Site of Special Scientific Interest (SSSI) as part of the River Crouch marshes and lies within the Essex Coast Environmentally Sensitive Area (ESA). The marshes, fleets and watercourses support a wide variety of birds, including over 2000 brent geese in winter and several duck species, mainly widgeon together with teal, tufted duck, little grebe and shelduck. There are also waders such as redshank, curlew and snipe, while skylarks are commonly seen over the flat fields where hares are abundant, and water voles can be found in the creeks. Insect life includes rare water beetles, dragonflies and damselflies.

Most of the land is grazing marsh, which has been drained to varying degrees. The field boundaries are large drainage ditches, mainly without banks or hedges, and some follow sinuous courses which betray their origin as natural creeks prior to reclamation of the saltmarsh. Indeed, several fields, notably those immediately adjacent to the fleet, are relatively unimproved and retain the intricate, gently undulating, 'fossilised' pattern of the creeks. More effort has been expended on those fields close to the farm (known locally as the 'flatlands'), where the fields have been systematically drained, are flatter and support better grass, and the pattern of creeks has been largely destroyed. The small area of arable (36.62 hectares/90.48 acres) in the eastern part of the farm occupies an area of slightly higher ground (Fig 2).

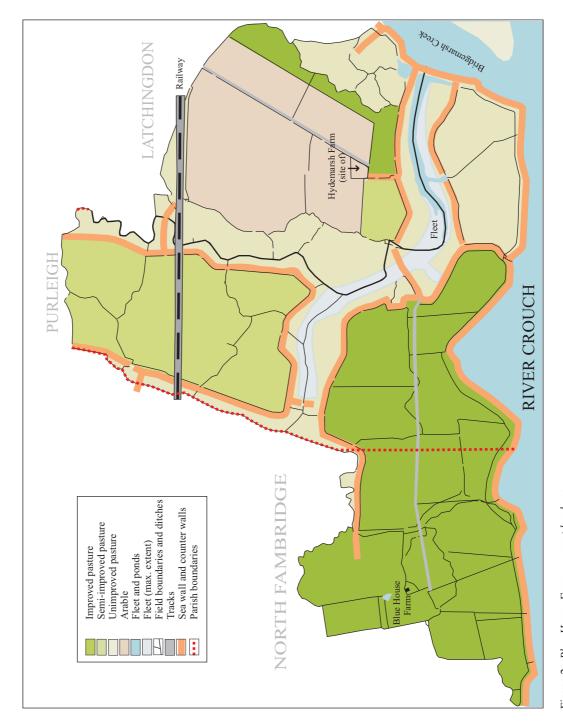


Figure 2: Blue House Farm: current land use

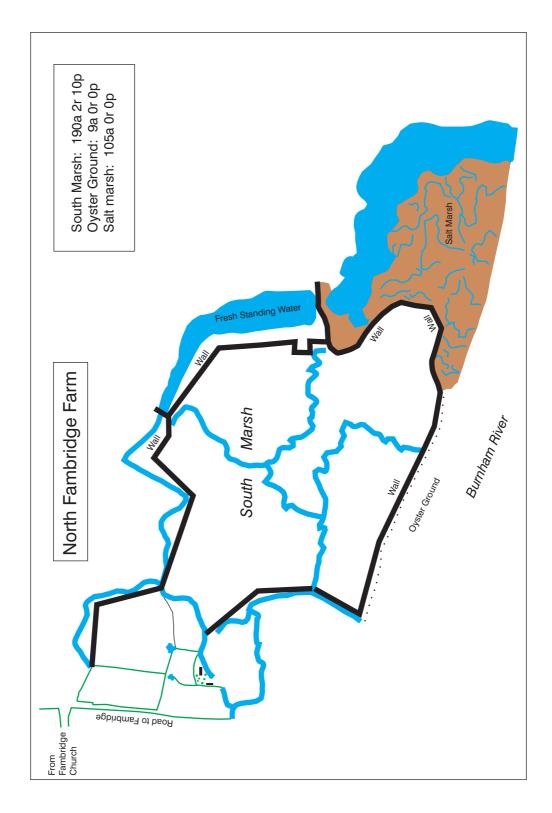


Figure 3: Blue House Farm ('North Fambridge Farm'), from a map of c 1775 (after ECRO: D/Dw/P51)

2. AN OUTLINE HISTORY OF BLUE HOUSE MARSH

History

Blue House Farm is situated in three parishes in the south-western corner of Dengie Hundred: the western part lies in North Fambridge, the eastern part is in Latchingdon and a central strip forms a southwards extension of Purleigh (Fig 2). The latter is notable in that Purleigh is essentially an 'upland' parish but includes this extension to gain access to the marshes. Indeed many parishes of the Dengie are laid out to run from the higher ground of the interior to the marshes - probably to provide balanced resources for each community. The area encompassed by the present farm is an amalgamation of three former holdings: Blue House Farm itself (formerly also known as North Fambridge Farm, South Marsh Farm and South Farm), part of Marsh House Farm in Purleigh and Hydemarsh Farm in Latchingdon.

The present Blue House farmhouse dates to the early 1800s, though enlarged in the 1860s, but it occupies an older site: two buildings are shown on a map of c 1775 (Fig 3). However, Blue House Farm seems to have been known earlier as South Marsh Farm, recorded in several deeds dating from 1685 (ECRO: D/Dra/T210/1). Indeed, although the surrounding area is labelled South Marsh on the map of c 1775, the title reads 'Blue House Marsh, part of the Estate of Charles Long Esq', confirming some local flexibility in the nomenclature. Charles Long had purchased the property by auction on the 22^{nd} August 1775:

'Particulars and conditions of sale of an improveable Freehold Estate called Blue House Marsh in the parishes of North Fambridge and Purleigh in Essex about 3 miles from Rayleigh and most conveniently situated near Burnham river for Conveying of corn to market and bringing manure &c to the premises'

The premises consisted of:

'farm house and offices, several pieces of fine meadow and marshland (295 acres) with an oyster ground of 9 acres in the occupation of Mr John Altridge of Rayleigh by assignment of lease from Ardinton Holdsworth for seven years at 130l per. ann. Payable half yearly. The premises are capable of such improvement' (ECRO: D/DMj/E5)

Strangely, Blue House Farm occupies a different site on a map published three years later, in 1777, by Chapman and André (frontispiece). It is depicted on the site of Hydemarsh Farm but labelled '*Blue Marsh*', probably in error. A map of 1814 shows that part of the farm which is situated in Purleigh, but not the remainder in North Fambridge (Fig 4).

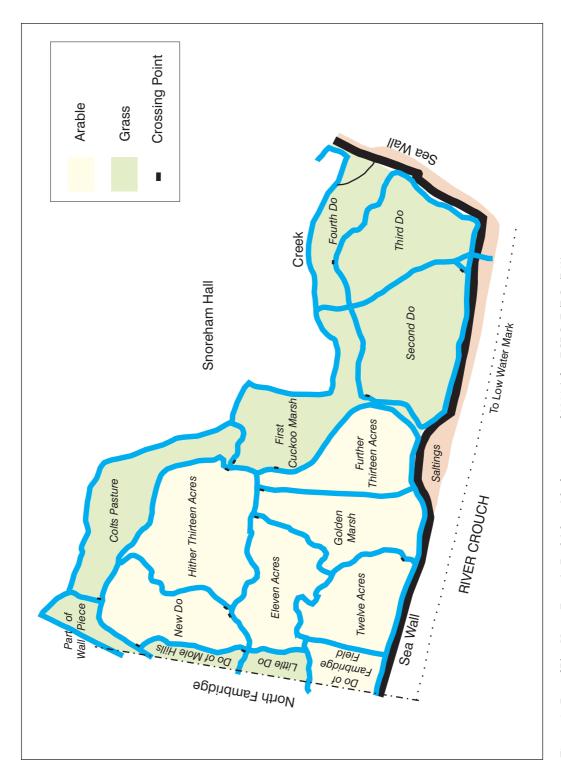


Figure 4: Part of Blue House Farm, in Purleigh parish, from a map of 1814 (after ECRO: D/DOp/B42)

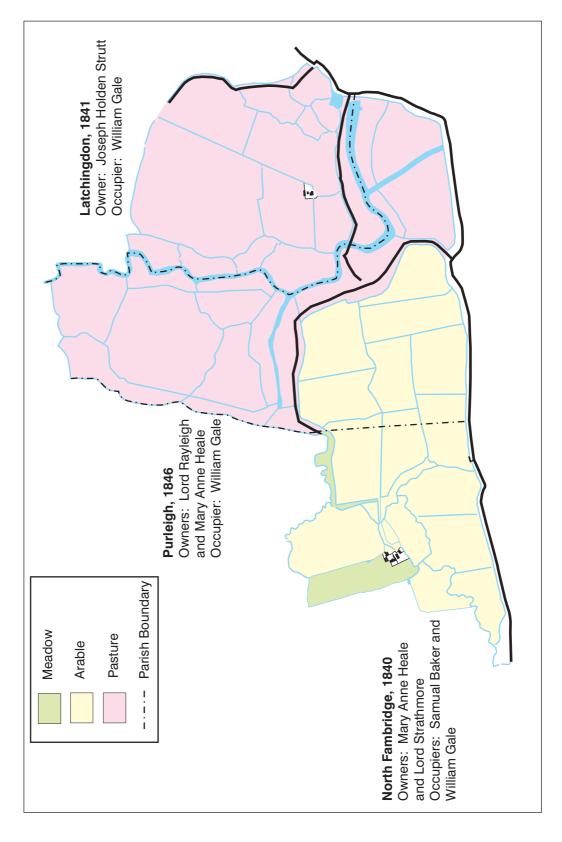


Figure 5: Blue House Farm in the 1840s, from the tithe awards for North Fambridge, Purleigh and Latchingdon (after ECRO: D/CT/133,277 and 207)

By the time of the tithe returns of the 1840s, Blue House Farm is shown on the original site and comprised a large complex of farm buildings, owned by Mary Anne Heale and occupied by Samuel Baker, who was engaged mainly in arable cultivation of the fields to the south and west of the farmhouse. The remaining land in the survey area - in both Purleigh and Latchingdon - was occupied by William Gale, who lived at Hydemarsh Farm (Fig 5). William was a tenant, holding land from Mary Anne Heale (of Blue House), Lord Rayleigh in Purleigh and Joseph Holden Strutt in Latchingdon. This William may be the same William Gale, or perhaps his son, who lived at Hydemarsh in 1814 (ECRO: D/DOp/B42).

Some land was lost by 1889, with the opening of a Southminster Branch railway line of the Great Eastern Railway (Board 1987, 75), the line running east to west across the northern part of the farm.

The reclamation of Blue House Marsh

The formation of the marshland at Blue House has its origin in the tidal action of the River Crouch, which was depositing layers of silt, sand and clay after the mid-1st millenium AD (Wilkinson and Murphy 1995, 197-201). The silt eventually formed into mud flats punctuated by tidal creeks and fleets. As plants began to colonise these areas, saltings built up to such an extent that they were only ever covered by the highest tides and in consequence slowly became drier and suitable for pasture land, rich in iodine and mineral salts on which sheep in particular thrived. Favourable economic conditions eventually resulted in reclamation of the saltings by the construction of embankments to exclude the tidal flow. As rain then washed the salt out of the surface of the marshes, the alluvial soil became highly fertile and suitable not only for grazing but for arable too (Grieve 1959, 3-4).

Documentary evidence reveals that some parts of the Essex marshlands were being reclaimed by the end of the 12th century, a time when sea levels were rising, with embankments constructed out of marshland clay. In 1210, the 'Law of the Marsh' was established, whereby each man was to contribute to the upkeep of the sea defences from which he benefited. Gradually, various organised commissions were formed for the construction and maintenance of embankments, beginning at the end of the 13th century when coastal defences came under the supervision of the King's justices and other officials. At first these commissions were confined to the Thames area, but slowly spread north into Essex, with the first commission established in 1451, for Tendring Hundred. The first half of the 16th century saw the creation of the Court of Sewers, a legal body which supervised the tidal defences for the next 300 years (Grieve 1959, 6-12). However, Blue House Marsh never came under its jurisidiction because official control was concerned with the Dengie levels, ending at Bridgemarsh Island just to the east of the farm. In consequence, the sea defences at Blue House remained the sole responsibility of its owners.

It appears that most of the coastal grazing marshes of Essex north of the Thames were gained from the sea in three stages, between 1575-1715, 1780-1820 and 1850-1880 (Gramolt 1960, 138-148). The price revolution was one of the main factors for the initial impetus in reclamation, with much higher prices offered for reclaimed marshes than for saltings. There was also an increased demand for agricultural and marshland products to satisfy a rapidly growing population, with Essex ideally placed for access to the London markets. The main reclamation at Blue House would fit comfortably into the earliest phase and there is some local evidence in the form of an agreement for part of North Fambridge manor in 1592. A bond of £40 was to be made void if James Osborne or William Walker, between July and November, 'inned 70 acres of marsh belonging to North Fambridge Manor' and with a sufficient strong and able wall defended the marsh from the sea so that it lay 'drie from overflowinge' and was 'a sufficent Inned Marshe as such is accustomed' (ECRO: D/DM) E2/1; Gramolt 1960, 115).

The earliest certain evidence for reclaimed land at Blue House dates to c 1700, comprising a map which includes the south-western corner of the present farm (Figure 6). At that time, this area was called 'East Marsh', part of the 'demeasnes' of North Fambridge Manor,

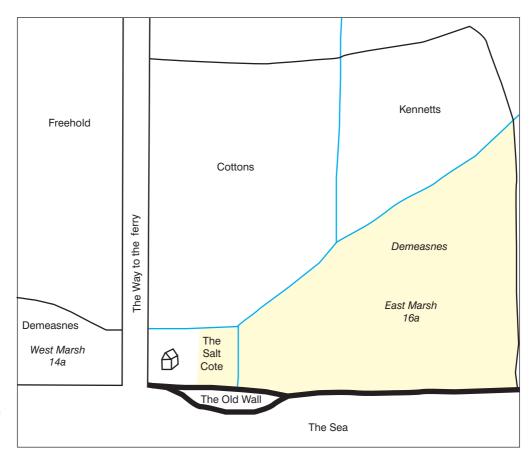


Figure 6: The south-western corner of Blue House Marsh (shown yellow), called 'East Marsh', from a map of c 1700 (after ECRO: D/DMj/P1)

protected by a sea wall along the River Crouch. What is presumably an older flood defence is referred to as '*The Old Wall*'. '*West Marsh*' lay on the other side of the Ferry road.

The map of c 1775 shows the extent of reclamation achieved by that time: Blue House Marsh, called South Marsh, comprised 190 acres of enclosed marsh with 105 acres of salt marsh and 9 acres of 'Oyster Ground' beyond the sea wall (Fig 3). The western portion of this wall is of particular interest because it curves inland towards the farm and its existence implies a relative sequence in reclamation – probably separating the *earlier* East Marsh of the 1700 map from the *later* South Marsh.

The 1775 map further reveals that the fleet had been excluded to the east and north-east of South Marsh, leaving only a part of '*Cuckow Marsh*' unreclaimed in the south-eastern corner of the present farm. The fleet had been dammed to divide the salt-water fleet from the fresh water beyond, and there was a second dam at the head of this fresh water.

The second main period of reclamation on the Essex marshes took place between 1780 and 1820. Added impetus was given by the Society for the Encouragement of Arts, Manufactures and Commerce, which awarded medals for gaining the greatest quantity of land from the sea as well as for the best reclamation techniques. During this period marshland was being turned over to arable cultivation, when grain prices were high, especially during the Napoleonic Wars (Gramolt 1960, 143). The map by Chapman and André of 1777 provides an overall picture of reclamation at Blue House Marsh at the beginning of this period, with only the 'Cuckow Marsh' unreclaimed: all other areas of 'North Fambridge Marsh' were enclosed. However, this last portion was reclaimed only a year later, in 1778, as recorded in the account books of John Strutt, the owner of Hydemarsh Farm. Co-operating with the owner of Cuckoo Marsh, he built a new sea wall, thus damming the last section of the fleet. Strutt bore one third of the costs which totalled £600 6s 9½d (ECRO: Strutt 1939, 24).

Further small pieces of evidence point to the antiquity of enclosure on Blue House Marsh. A particular of Hydemarsh Farm in 1819 utilised a survey of 1776, containing a remark against the former 'salts and ooze' of the old creek and that 'these have been some years nearly all enclosed from the creek' (ECRO: D/DOp B39/52; Gramolt 1960, 116). In addition a map of Purleigh, dating to 1829, calls many of the sea walls 'old' (Gramolt 1960, 114), and the 1840 Tithe of North Fambridge names one field north-east of the farm as 'Old Wall Piece' (ECRO: D/CT/133).

In summary, the existence of established marshes in 1700 and 1775 points strongly to an early date for reclamation: probably the late 16th and early 17th centuries as suggested by the

North Fambridge record of 1592. Gramolt presents a likely sequence, beginning in the east, north-centre, north-west and south-west, leaving unenclosed creeks and the central fleet flowing between the inned areas. These creeks were then dammed in stages. Finally, after Cuckoo Marsh was embanked, the last seaward portion of the creek was dammed (Gramolt 1960, 114).

The flood of 1897

Major flooding occurred at Blue House Marsh in 1736, 1897, 1929 and 1953. The 1897 flood was particularly severe and breached the sea wall in several places, causing huge lakes to be formed at each subsequent high tide. In a newspaper article of 1898, the Rev McLeod recorded the deplorable state of the parish, caused by four breaches in the sea wall, one 150ft wide, with 500 acres of land under water (Braithwaite 1996, 48-9). Grieve adds to this, recording that in 1898 some 5,000 acres of land between the Ferry and Clementsgreen Creek in North Fambridge were flooded. The rector of North Fambridge paints a more vivid picture with:

'Several farms are flooded more or less.....the land is now covered with seaweed and marsh samphire growing everywhere. The gulls and sea birds are making the fields their feeding ground' (Grieve 1959, 48).

The breaches caused by this flood are preserved today in the large insets to the sea wall, known locally as horseshoes (Fig 7). At low tide the remains of the lines of wooden stakes for the temporary dam constructed during the attempts to rebuild the wall along its original line can be seen. As this was unsuccessful, the wall was rebuilt further back on its present line.

As these were private sea walls, the Local Government Board would not give public money for their repair and due to agricultural depression nobody could meet the high costs (Board 1987, 75). Nevertheless, in 1898 the owners of Blue House Marsh, J W Strutt and Lord Raleigh, made several attempts to close the gaps in the sea wall east of the ferry, but water again poured through them in 1899 (Braithwaite 1996, 48).

It had to wait until 1906, and the Unemployed Workman Act, that the repair of the Fambridge breaches was made possible under a Central Body for London, set up by the Local Government Board (Board 1987, 75). This provided for the establishment of a colony of unemployed workmen at South Fambridge. Each man worked a 44-hour week in return for the maintenance of his family and provision of fares, lodging, food, pocket money, medical care, and some clothing (Board 1987, 86). The scheme was first put forward in the winter of 1903 to a parish meeting, by the 'Unemployment Association'. Unlike other farm

owners in the area, Lord Raleigh was not consulted, which suggests that his attempt to repair the wall was temporarily successful (Board 1987, 76). However, his subsequent offer to give the Body £1000 or 200 acres of reclaimed land if the sea wall was repaired under the Act, is likely to have been a major factor in the Committee accepting the proposal (Braithwaite 1996, 50).

An engineer was appointed to oversee the repairs, at a fee of £200, one Albert Edward Carey who had reclaimed the marshes at Newhaven and Thames Haven. His first survey of the area in 1906 indicated two breaches in the sea wall east of the ferry 600 yards apart, with Lord Raleigh's attempted repair, following an inset course, broken in several places. Carey's initial plan, at a cost of £4300, was to repair the eastern quadrant of the eastern breach and the western quadrant of the western breach, and to join the two across the flat in the rear of the old river wall. The extant wall west and east of the breaches was to be raised by 0.6m. The colony labour force would build up the walls a few feet at a time, when the tide was on the ebb.

However, an exceptional tide in March 1906 reached the railway line, 1km to the north of the River Crouch, and widened the main breach east of the ferry to 213m. This forced Carey to change his plans, deciding to pile the western breach and do away with the inset wall, utilising it as a quarry for material to stiffen the piling. The eastern inset was to be strengthened by adding to its width and height. The huge volume of water behind the sea wall was a threat, and to control it Carey proposed to dam the arterial ditches that fed into the breach and gradually drain it away through controlled sluices in the sea wall. The skilled work of piling was to be done by a contractor and the labouring work on the walls would be done by the unemployed, under the direction of twenty experienced local wallers (Board 1987, 77).

Much of the work was completed in 1906 by over 200 men (between 149 and 189 were based at the colony together with the contracted workman), constructing timber dams reinforced with chalk and clay as well as strengthening and raising of the original wall. However, the dams were washed away in August 1906 and, after a second failure, it was decided that the contractor would continue piling to form a temporary dam, and that the colonists should rebuild the inset wall. This was done by cutting away the surface of the natural soil for a few metres so that the wall would rest on a solid platform of clay, and to build a new wall in puddle clay tier by tier, treading and punning each layer into the stratum of the clay below. The ditch behind the sea wall, known as Borrow Dyke, was dug to provide material to build and rebuild the sea wall. The work was completed and the colony closed in July 1907, although the timber dam was not removed until 1909. The total cost of closing the eastern breaches was £11,000 to the contractors and £15,000 for the establishment and maintenance

of the colony. To recover some of this money the Committee decided to accept Lord Raleigh's offer of £1000 rather than 200 acres of reclaimed land (Board 1987, 83).

The first to third edition Ordnance Survey maps indicate the main changes to the sea wall during this period. The new line of the sea wall with a new external stone facing is indicated on the third edition and can be compared with the early sea walls as represented on the first and second edition maps (Ordnance Survey 1873; 1897; 1924).

Grazing on the marsh

At the time of the Domesday survey in 1086, the Essex marshes were very important sheep pastures and cattle were less common Much of this sheep grazing took place on unenclosed saltings. However, following the extensive reclamations of the later 16th century and after, cattle farming came to the fore and fattening was predominant, with the stock brought to the marshes in the spring, fed on the lush pasture over summer and sold at the beginning of September. Thereafter, the grass was allowed to recuperate for up to six weeks, when further cattle were brought in to feed over winter, supplemented by hay in harsh weather. These cattle were ready for sale by February and all pasture was cleared of stock during March, so the spring crop and summer flush were not spoilt (Gramolt 1960, 348-349). Some sheep continued to be grazed on the marshes, generally on the sea wall and saltings during the day and on the marshes at night. The Latchingdon tithe apportionment names two areas on the Blue House Marsh as 'sheep shed' and 'shed marsh' (ECRO: D/CT/207).

A survey of the adjacent manor of Woodham Ferrers, dated 1582, encapsulates very neatly the economy of these Essex coastal estates in the later 16th century:

'Beynge in a cuntrie verye well stored with wood, water, meadowe, pasture and corne soyle, and havinge verye nere thereunto two wharfes or crekes of the sea called Clements Grene and Woodham Fanne in the parishe of Woodham aforesaide, very fytt and dayley used for transportinge and conveyance of billet, hostrye, fagott, talwood, butter, cheese, and corne to and from the cytie of London and els where, for bryngynge thether of chauke, fishe, baye, salte, and other marchandies; and nere also unto the same wharfe there be certen salt cotes whiche do make whyte salte. Nere also to the same wharfe be certen oyster laynes; the moste parte of the grounds of the same parishe of Woodham Ferrys standeth by pastrage of mylche kyne and ewes, for the makynge of butter and chese' (Emmison and Hull 1951, 9)

Much reclaimed marshland was turned over to arable, principally from the end of the 18th century, when uncertainty in foreign supplies due to war conditions caused grain prices to soar and, being a large importer of wheat, England suffered. As meat prices and demand

remained relatively stable, stock began to be kept in smaller acreages and arable fields were made larger. Wheat, barley, beans, rape, cole and mustard were the main crops.

Conversion to arable required levelling of the undulating marshland, a huge task exacerbated by immense anthills which had built up over many years; some landlords inserted clauses to leases requiring tenants to remove them (Gramolt, 1960, 362). To prepare the pasture, chalk was applied to the surface (at 6 wagon loads of 90 bushels each to the acre) and left for 4 years, after which the marsh was ploughed and sown. Generally crops followed a 6 course system of fallow, oats, white mustard or barley, clover/grass, with two crops of wheat separated by one of beans or peas (Gramolt 1960, 370-372).

Blue House Marsh conforms to this general model of a mainly pastoral holding until the later 18th century, with Charles Long farming, in 1775, 190 acres of enclosed meadow and pasture, 105 acres of salt marsh and an oyster ground of 9 acres. Change followed soon and in 1814 there were at least 90 acres under arable, possibly in response to corn shortage during the Napoleonic Wars (ECRO: D/Dop/B42). The tithe awards of the 1840s reveal that nearly all of the land south and west of the fleet was under arable (Fig 5).

In recent times land use on the flatlands has reverted to pasture but there are 90.48 acres of arable in Latchingdon on the north central part of the farm.

Salt making

Evidence for continuing trade in salt comes from the map of c 1700 which shows, on the south-eastern margin of the farm, a small enclosure with a building inside it, called 'The Salt Cote' (Fig 6). This could have been a small building associated with salt making or perhaps a cottage on the site of an old saltern. However, salt production in the adjacent parish of Woodham Ferrers is documented as 'le Saltcote' as early as 1332, so it is possible that the Blue House site may have a similar antiquity, especially given its location next to an important river ferry (a large and well-preserved group of mounds survives in Woodham Ferrers, believed to be related to medieval or post-medieval salt-making (Essex SMR 13563). By the end of the 18^{th} century, the salt trade was in decline (Emmison and Hull 1951, 9).

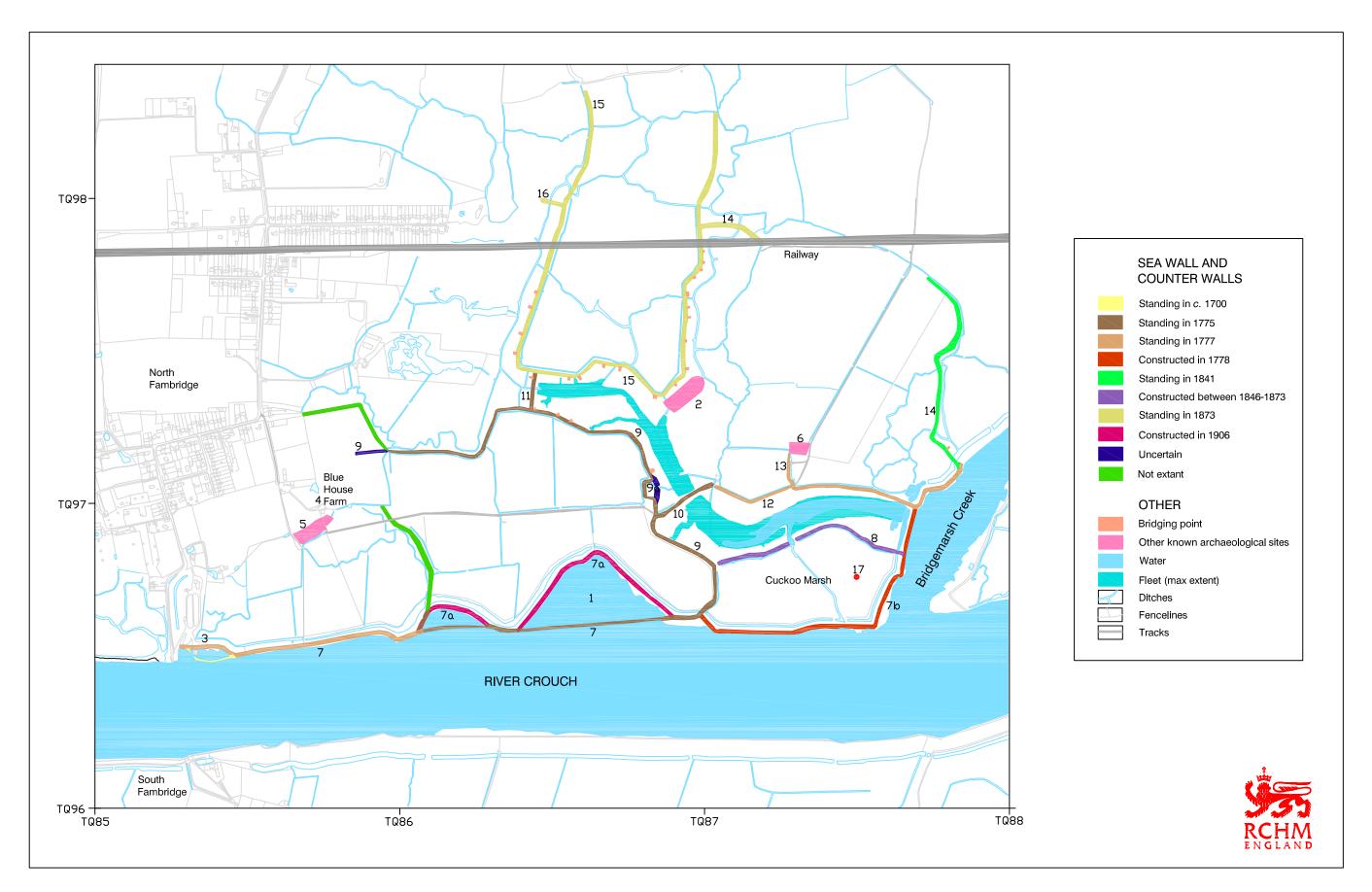


Figure 7: RCHME survey plan of archaeological features on Blue House Marsh (Based on Ordnance Survey Digital Data, Crown Copyright Reserved)

3. ARCHAEOLOGICAL DESCRIPTION and INTERPRETATION

Following full ground reconnaissance of the farm, a number of features of archaeological interest were located. The section below lists and describes these features, together with those which were previously documented. For numbers and letters which appear **in bold**, consult Figure 7 and any other figure number given in the text.

Prehistoric land use

On the inter-tidal zone beyond the sea wall, there is evidence for a submerged forest on a buried prehistoric land surface of Lower Peat (1), sealed by estuarine clay and being eroded by tidal action. Some 44 pieces of flint have been found on the foreshore, although not all are definitely struck; one piece may be Mesolithic (Essex SMR nos 13564, 13680).

Late Iron Age and Romano-British salt making

Along the Essex coast in general, there is abundant evidence for the production of salt from seawater in the later Iron Age and Roman periods. There have been numerous finds of this date along the Crouch, particularly on the south bank and further upriver, in the form of red hills - amorphous mounds made up of fire-reddened debris from the production processes (Fawn *et al* 1990, 50; Wilkinson and Murphy 1995, 166-69). Many occur on land which has been enclosed from the sea since the end of the Roman period and a single instance is known at Blue House, at a location in the central part of the farm (2), where fragments of *briquetage* were observed in 1983. Fragments of these crude ceramic vessels, used for storing salt, were found in the cut of a drainage ditch, forming two low mounds on a buried land surface under 1.3m of estuarine clay (Essex SMR no 13346). Given that most of the farm is mantled with similarly deep estuarine deposits which were forming after the mid 1st millenium AD, only the most prominent red hills would show above the present ground level. The likelihood is, therefore, that other sites survive and might be revealed through agriculture and deep drainage. It follows also that any visible earthworks are relatively late in date, possibly post-medieval and certainly post-Roman.

Post-medieval salt making

The 'Salt cote', shown on the map of c 1700, lay partly in the south-western corner of the farm, (3). There are no surface features in this area which might be linked with this activity.

Post-medieval reclamation and agriculture

Blue House Farm

The farmhouse (4) is a weatherboarded structure, generally regarded to date to around 1800. It may have been built as part of the improvements that followed the sale of 1775. A group of

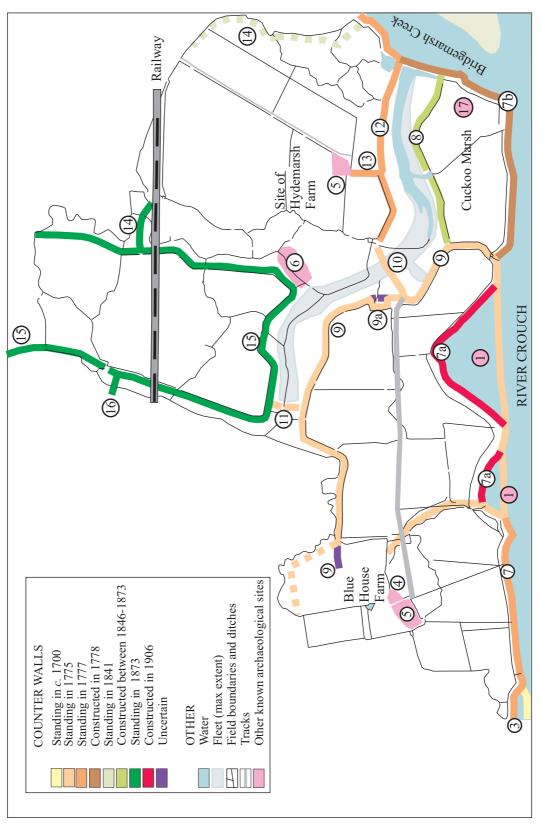


Figure 8: RCHME survey plan of archaeological features around Blue House farmhouse (original at 1:1000 scale)

farm buildings, yards and enclosures stood to the west of the house, reaching their maximum extent in the 1840s, and still standing in 1897. However, by 1924, only the farmhouse remained while all the ancillary buildings and yards had been cleared, with only a triangular-shaped garden on the south-east side of the house remaining (Ordnance Survey 1897; 1924).

Earthworks (5) mark the site of these farm buildings, yards and boundaries (Fig 8). The most obvious feature is a rectangular platform, **a**, 21.0m by 13.0m and 0.4m high, the site of a large building; perhaps a barn. Slight scarps, **b** and **c**, mark former divisions between yards. All other features appear to represent demolition and levelling deposits while at the northern end, the sites of two buildings lie partially under the present farm approach track.

The earlier farmhouse and ancillary building, which may have been of 16^{th} -century origin, lie somewhere under these earthworks: the approximate positions are shown on the map of c 1775 (Fig 3). A low scarp, **d**, may be the remains of an associated boundary.

Hyde Marsh Farm

Hyde Marsh Farm **(6)** appears on Chapman and André's map of 1777, labelled '*Blue Marsh*'. At the time of the tithe, it comprised a farmhouse and two ancillary buildings in a small sub-rectangular yard. It survived complete in 1953 but had been demolished and levelled by 1961 (NMR APs: 58/1020/175-6; 543/1426/182-3). During the present survey, the site of the farm was under plough but building and domestic debris, comprising brick, mortar, tile, slate and pottery could be seen in the ploughsoil.

The farm landscape

The ground surface across the farm varies considerably, reflecting the differing agricultural regimes to which it has been subjected. There are a few fields of rough pasture where ploughing has probably not occurred and which have probably been down to pasture since reclamation (Fig 2). Here, the ground surface, which undulates considerably and has a well-preserved pattern of relict creeks, is difficult to investigate because of the abundance of amorphous mounds and hollows which could easily be mistaken for man-made features. However, even on the roughest ground there are traces of systematic drainage in the form of parallel furrows, probably infilled trenches containing ceramic land drains (Fig 9). In one instance, on the southern side of the fleet, these furrows cut into the base of a counter wall of mid 19th-century date. There are few other recognisable features except small amorphous borrow pits and scrapes, always situated alongside counter walls, and a source of material for their construction and repair.

A larger part of the farm comprises semi-improved pasture, where systematic drainage and ploughing has occurred. In these areas the pattern of relict creeks is vestigial, with only the deepest creeks surviving as shallow, spread earthworks. In many cases, a regular pattern of parallel furrows can be seen where land drains have been inserted.

The 'flatlands' east and south of the farm are the most improved and were subject to a vigorous arable regime in the past, probably for large spans of the 19th and 20th centuries. Only occasionally are small elements of the creek system visible and all fields show clearly the parallel furrows of land drain systems.



Figure 9: The central and western part of the farm in 1970. Note the rectilinear drainage network in the fields to the *left and the sinuous* relict creek system in those to the right. The prominent indentations to the sea wall (lower *left)* are the result of rebuilding after the flood of 1897. Also visible is a rectangular 'enclosure' formed by an indentation to a counter wall adjacent to the fleet (upper centre)(Extract from NMR: OS/70020/143)

The sea wall and counter walls

The farm contains several long and sinuous earthwork banks which were built to hold back the tide (the sea wall) and contain flood water (counter walls). The construction of the sea wall in particular was a slow and labour-intensive business. A typical construction gang comprised twelve men: two fillers to cut the clay, six runners who pushed barrows of clay to three packers building the wall, while a boy kept the equipment clean. In general terms, two stretches of wall were built across the saltings to the lowest point over which the completed wall was to pass. Its course was prepared by removing vegetation and by digging a trench to expose clean marsh clay, which would bond securely with the clay deposited for

construction of the bank. Soft mud from rills and creeks was removed and hollows filled with brushwood and good clay. The walls were advanced at or near their full height to prevent tidal erosions, the most difficult part being to close the final gap. This was usually piled with timbers driven across the two wall ends and strengthened with cross pieces to prevent the earth from sliding out of the bottom. The walls were finished with a turf covering to reduce the rate of erosion but still required constant maintenance to counteract the effects of settling, slumping, weathering and erosion, let alone the gradual rise in sea level (Gramolt 1960, 219-221).

The sea wall and counter walls are of broadly similar form across the marsh, with flat tops and moderate sloping sides, on average 8.0-10.0m wide and 2.0-4.0m high. Material for their construction came from drainage ditches on both flanks and from borrow pits and scrapes alongside. The latter, particularly well preserved along the northern side of wall 9, attest to continuous patching and repair. In three cases, the western part of wall 9, the southern and eastern parts of wall 15 and the northern part of wall 10, there is clear evidence for a second phase in wall construction. This takes the form of a stepped profile, reflecting deposition of additional material on an existing wall.

In general, the flanking ditches of those counter walls bordering the fleet are no longer maintained and survive as silted earthworks: all others continue to function as drains.

Counter walls **9** and **15** have several short spur banks on the fleet side, forming causeways across the flanking ditches which allowed for safe passage of man and beast onto the fleet pasture when the drains were full. In many cases these causeways are lower than the tops of the counter walls, perhaps indicating that they relate to an earlier phase of wall, even in those places where there is no visible evidence for wall heightening. Formerly, there were many more ways across the drainage ditches: the 1814 map indicates several '*crossing points*', one of which corresponds to a causeway visible in the field (Fig 4).

The sea wall 7 holds back the river along a sinuous course from the site of the Fambridge ferry to Bridgemarsh Creek: the entire seaward face now has a modern concrete block revetment. Two large insets, 7a, date from 1906, completed following the flood of 1897. West of these insets, the wall is pre-1775, while to the east of them, wall 7b was built to enclose Cuckoo Marsh in 1778. Wall 8 was constructed after 1846 and before 1873 to prevent flooding of Cuckoo Marsh from the fleet.

Wall 9 was in place by 1775, running along the south side of the fleet in a sinuous course to a point north-east of Blue House Farm; at this point, it has been removed and the furrows of land drains cut across its denuded line. However, in 1775, just east of its present end, the

wall turned north then west inside the line of the present drainage ditch, almost as far as the Fambridge road. A curious diversion, **9a**, occurs along the course of wall. The wall is formed into a rectangular 'enclosure' of some 44.0m by 28.0m, open only to the fleet side. Although shown on the 1775 map, it is clearly an alteration to the original wall, the stubs of which can be seen forming a straight line across the open side, with a gap only for the passage of a small creek. Although the purpose of this 'enclosure' is unknown, it presumably contained something. Several small depressions inside might be ponds or tanks, perhaps connected with salt making, oyster farming or stock watering.

Branching off from wall 9 are two dam walls 10 and 11, in place by 1775, crossing the line of the fleet and separating fresh water draining from the west from the salt-water fleet. The dams created a large sheet of fresh water which could be utilised for stock on the farm.

Wall 12, on the north side of the fleet, is also known in 1777, as was the spur wall 13 running north from it to Hydemarsh Farm. The existence of wall 12 at that time also rather implies the presence of wall 14, which formerly ran around the eastern edge of the farm. Most of it has been removed, though the southern third survived in 1970 but was flattened by 1980 (NMR APs: OS/70020/141-2; MAL/80030/127-9). Today, only slight traces remain at the extreme southern end and a well-preserved but short stretch survives north of the railway line.

Wall 15 survives intact, though cut by the railway line, defining a discrete block of land with natural watercourses outside it on all but the northern side. It looks to have been driven south from higher ground in Purleigh to reclaim land up to the edge of the fleet. The two northern ends lead onto trackways which lead to the Woodham-Althorne road.

Wall **16** is a spur off wall **15**, leading in a shallow arc to higher ground on the eastern fringe of North Fambridge. Only a short stretch was inspected, the remainder lying outside the farm boundary. Its full course is shown on the OS 1st edition of 1877 and visible on aerial photographs dated 1961 and 1980 (NMR APs: 543/1426/182; MAL/80030/127-9).

Miscellaneous features

A cone-shaped piece of steel plate 17 lies abandoned in a slight depression in Cuckoo Marsh. This is said to be part of a V2 rocket which fell on the marsh towards the end of the Second World War.

4. CONCLUSIONS and RECOMMENDATIONS

The development of Blue House Marsh as a working farm along lines sympathetic to wildlife also provides a suitable context for the preservation and management of an historic landscape of essentially post-medieval date. This report has examined, in outline, only that which is known or visible: much will lie under the ground. It is simply a beginning in the processes of interpretation and understanding.

The most important result of the present survey has been to underline the significance of the whole landscape at Blue House, itself part of the greater landscape of the Crouch estuary. This is a reclaimed landscape, created against great odds and frequent setbacks. Reclamation of Blue House Marsh probably began in earnest in the later 16th and early 17th centuries, at the instigation of local manorial lords in North Fambridge, Purleigh and Latchingdon: the demand created especially by the growing market in London was sufficient to justify the expense of building sea walls and counter walls to enclose and improve the saltings.

The principal visible monuments of this landscape are the sea walls and counter walls and drainage ditches. It is of interest that the parish boundaries do not run along any of the counter walls, instead they follow drains and watercourses or ignore all topographical features. This is a clear indicator of the relatively late date of reclamation and wall construction. Moreover, the pattern made by the walls, enclosing discrete blocks of land which relate directly to each parish, underlines the independent, piecemeal and entrepreneurial nature of their creation. Each wall was built to capture and protect blocks of land against inundation and to contain the fleet leading off Bridgemarsh Creek. There seems to be up to seven blocks, including two narrow strips along the fleet (Fig 10). Of these, only Cuckoo Marsh is securely dated, to the middle of the 19th century, but others had been long enclosed by the later 18th century. In one case, there seems to be a sequence of reclamation, with successive enclosures east of Blue House Farm. The *earliest known* documented dates of counter wall construction are shown in Fig 7, although many are clearly much older.

It is highly likely that further work might refine or alter the sequences and interpretations contained here. That work might comprise:

- A survey to locate remaining counter walls, and more detailed documentary work, to trace more fully the sequence of reclamation and counter wall construction in North Fambridge, Purleigh and Latchingdon parishes
- A wider survey to map and interpret the sea walls and counter walls in the upper Crouch estuary, allied to documentary research. From this work might emerge a deeper understanding of the sequence of reclamation on the marshes along the river.

- Archaeological examination and possibly dendrochronological (tree-ring) dating of any structural timbers which might in the future be exposed in the sea walls and counter walls.
- Reporting and monitoring of chance finds occasioned by work on the farm, to further our understanding of the Roman and prehistoric landscapes buried deep under the marsh.

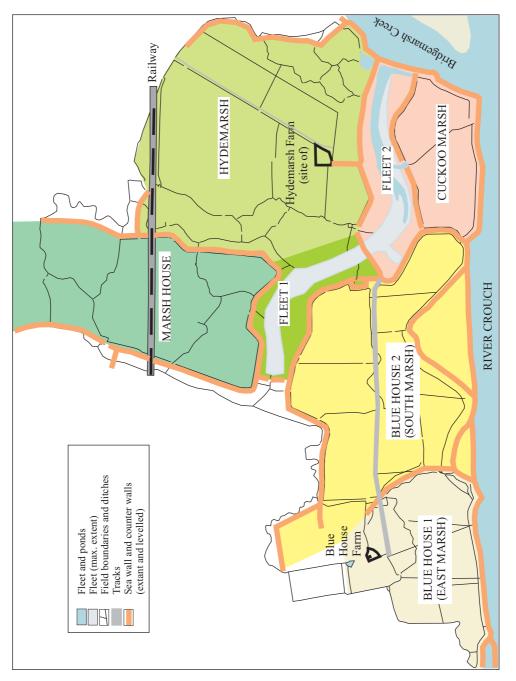


Figure 10: RCHME interpretation plan showing putative blocks of reclaimed land (in different colours) on Blue House Marsh

5. SURVEY and RESEARCH METHODS

The whole area of the reserve was walked by Paul Pattison, Moraig Brown and Anwen Cooper, in transects approximately 30m apart. Subsequently, measured survey of all features was achieved by digital capture using a Leica TC1610 electronic theodolite and EDM, followed by conventional graphic survey using taped measurements from fixed points. All survey data was then anchored into OS digital mapping, kindly supplied under licence by Essex County Council.

Research was undertaken by Louise Barker and Anwen Cooper in the Essex County Record Office in Chelmsford. This report has been written and the illustrations prepared by Paul Pattison, Louise Barker, Moraig Brown and Anwen Cooper.

The survey archive and a copy of this report has been deposited in the National Monuments Record Centre in Swindon, the public archive of English Heritage, under event reference no 1324168 and monument record no TQ 89 NE 25.

6. ACKNOWLEDGEMENTS

The authors are grateful to the staff of Essex County Council, Archaeological Section, for their assistance in this project, in particular Nigel Brown, Paul Gilman and Sally Gale.

Thanks are due to Nick Robson, the warden of Blue House Farm Nature Reserve, for his help and encouragement.

7. BIBLIOGRAPHY and SOURCES

Published Sources

Braithwaite J J B, 1996 The Parish of North Fambridge, Essex. Early era-1996

Board B A, 1987 'The Fambridge Colony: an experiment in land reclamation by unemployed Londoners' Essex Archaeology and History 18, 75-88

Emmison F G and Hull F, 1951 'Survey of the Manor of Woodham Ferrers, 1582' Transactions of the Essex Archaeological Society 24, 6-16

Fawn A J, Evans K, McMaster I and Davies G, 1990 The Red Hills of Essex: Salt Making in Antiquity (Colchester Archaeological Group)

Gramolt, D W 1960 The Coastal Marshlands of East Essex between the Seventeenth and mid-Nineteenth Centuries. (Unpublished MA Thesis, University of London), quoting ECRO: D/DMj E2/1 and ECRO: D/DOp B39/52

Grieve H, 1959 The Great Tide: The Story of the 1953 Flood disaster in Essex

Mulman, 1772 A History of Essex vol. 5 (Chelmsford)

Ordnance Survey (OS):

1873 1st Edition 6" Essex sheet 62

1897 2nd Edition 6'' Essex sheet 62

1924 New Series 6" Essex sheet 74 NW

Wilkinson T J and Murphy P L, 1995 The Archaeology of the Essex Coast, Volume 1: The Hullbridge Survey East Anglian Archaeology 71

Unpublished Sources

a) Essex County Record Office, Chelmsford (ECRO)

D/CT/133: North Fambridge tithe award and map

D/CT/277: Purleigh tithe award and map

D/CT/207: Latchingdon tithe award and map

Chapman and André: A map of the County of Essex, 1777 (sheet 18)

D/DOp/B42: Valuation of the property of Miss Heale, occupied by William Gale showing Blue House farm and Cuckoo Marsh. Including 'a map of the farm known by the name of Blue House Farm situate in the parish of Purleigh, Essex, 1814

D/Dra/T210/1: Deeds of South Marsh Farm, alias Blue House Farm and lands – 1685-1755, 1755-1867 (withdrawn)

D/DRa/T210/2: Deeds of Blue House Farm 1861-1899 (withdrawn)

D/DMj/E5: Printed sales catalogue for Blue House Farm, 1775.

D/DMj/P1: Map of North Fambridge, c 1700

D/DDw/P51: Map of North Fambridge, c 1775 – 'Blue House Marsh, part of the Estate of Charles Long Esq'

Strutt CR 1939 The Strutt family of Terling 1650-1873 (privately printed) p. 24)

b) Essex County Sites and Monuments Record Office, Chelmsford (ESMR)

Record nos 13346, 13563, 13564 and 13680

c) National Monuments Record Centre, Swindon (NMRC)

Record no 1043714 Woodham Ferrers to Althorne Roman Road