

1.12 BROAD CHARACTER: ENCLOSED LAND

1.12.1 CHARACTER TYPE: RECLAIMED LAND

REGIONAL PERSPECTIVE: EAST ANGLIA

INTRODUCTION: DEFINING/DISTINGUISHING ATTRIBUTES

Large swathes of reclaimed land survive in East Anglia, mainly as a result of its low-lying topography and proximity to the North Sea. Of particular note are the extensive areas of the Fens around the Wash in Norfolk and the Broads region in the north east, including the seaward area of Halvergate Marsh. The former is reclamation from wetland, the latter from tidal marshes.



Horses grazing Halvergate Marshes

However smaller areas of piecemeal reclamation exist throughout the coastal region. For example, approximately 30% of the Suffolk coastal NMP project area is composed of drained, reclaimed and embanked land (Hegarty and Newsome 2005, 79). Many areas along the North Norfolk coast such as Holkham have been reclaimed from the sea or tidal marsh. In Suffolk areas of reclamation are notable around Orford and the estuaries.

Distinctive types of landscape have been created through land reclamation in the region. One of the most distinctive landscape types is coastal grazing marsh, an artificial environment created by enclosing saltmarsh. This has traditionally been used in the region for grazing cattle in summer and sheep throughout the year (English Nature 1997, 8). The relict saltmarsh structure is often still apparent in early dyke systems.

A distinctive feature of the built environment which is intimately associated with reclaimed land in this region is the windpump or drainage mill, used to prevent flooding.

HISTORICAL PROCESSES; COMPONENTS, FEATURES AND VARIABILITY



A typical Broads drainage mill

Large scale reclamation of coastal wetlands in East Anglia began in the Anglo-Saxon period, although small scale reclamation may have been attempted by the Romans. By the late Saxon period the Norfolk marshland contained small villages with irregularly shaped fields protected from the sea by walls and embankments (Williamson 2006, 193-4). It is possible that reclamation of the Suffolk coastal marshes also began at this time (Williamson 2005, 28).

Reclamation increased in scale in the 12th and 13th centuries as the wealth and prosperity of the region grew with the burgeoning textile industry, although rising sea levels resulted in the need to defend previously enclosed land. One area which is known to have been extensively reclaimed at this time is the marsh around Orford, following the construction of the castle in the 1160s (ibid). It is also possible that the draining of Halvergate Marsh began early in the medieval period.

The naming of the 'Kings marshes' at Orford may indicate royal intervention in this reclamation (Hegarty and Newsome 2005, 81). In many cases it is likely that reclamation was a community activity, although piecemeal and small scale drainage also took place. Land was reclaimed for both grazing marsh and arable purposes. Initially sheep was the principal stock but later cattle became important.



Sheep grazing Halvergate Marshes

The new fields were created in bundles of parallel strips and medieval documents indicate that grazing marshes were usually divided into discrete properties owned by specific individuals (Williamson 2005, 29). Dykes acted as fences dividing the property and also provided drinking water for stock.

There was a notable similarity between reclamation in East Anglia and Holland at this time. While this may have been parallel development there is a possibility that Dutch specialists were employed in the East Anglian process (Williamson 2006, 194). These early medieval reclamations are often recognisable today as the original pattern of the saltmarsh was retained as serpentine dykes.

Reclamation accelerated in the late medieval/early post medieval period. In particular a number of religious houses such as Leiston Abbey and Butley Priory on the Suffolk coast drained large areas of the surrounding land prior to the dissolution. In the 1530s and 1540s 400 acres of marsh at Hollesley was reclaimed. Subsequently, in the 1570s 247 acres was reclaimed at Walton and in the 1590s a sluice was erected to drain the marshes around Trimley. It is likely that committees were established as early as the 16th century to maintain sea walls (Williamson 2005, 31).

In 1585 the General Drainage Act was introduced into parliament, allowing large landowners to overrule local proprietors and suppress common rights that obstructed the path of drainage schemes (Williamson 2006, 202). This had a profound affect on enclosure in East Anglia. In particular a large scheme was sanctioned in the 1630s to drain the Fens of West Norfolk and Cambridgeshire primarily through construction of the 'Old Bedford River'. This was only partially successful and very unpopular (ibid 204) with local communities, leading to riots. This process continued

before and after the English Civil War under the direction of Dutchman Cornelius Vermuyden including construction of the New Bedford River, the Forty Foot Drain and Denver Sluice. Nevertheless much of the Fens area remained common grazing.

In 1664 a Government Commission reported on the extent of salt marshes and derelict lands on the coast of Norfolk and Suffolk. Most of the 400 acres of unreclaimed wetland lay in the north, with small quantities in the south (Williamson 2005, 33). Reclamation of coastal marsh continued into the 18th century but slowed as most of the most easily 'inned' land had been reclaimed and there was little money to invest in improvement (ibid, 35). The land around Orford appears to have been modified after 1700 by filling in curvilinear dykes and replacing them with straight ones (Williamson 2006).

Reclamation began again in earnest in the late 18th century as the population rose and prices spiralled (Williamson 2005, 35). At this time a series of parliamentary enclosure acts allowed the conversion of common wetland into private property. This led to the enclosure of almost all remaining areas of damp common including the Fens, Broads and coastal marshes of Suffolk and Essex. Faden's dating of the progression of embankment in the Fens in his Map of 1797 shows the speed of the reclamation at this time.

The enclosed marshes were still predominantly used for grazing (Williamson 2006, 212). However, pressure to convert to arable increased in the 18th century as grain prices rose to unprecedented heights during the Napoleonic Blockade (Williamson 2005, 44).

The extent of this effort is shown by the activity in the Minsmere Level (1600 acres) which was drained following a parliamentary act of 1810. This involved the construction



The Stracey Arms windpump at Halvergate Marshes

of a 5 km drain and embankments costing £1835 and ultimately a substantial sluice built of iron and connected to the sea by a 100 m long iron pipe, 4 m in diameter. These later reclamations are often recognisable in today's landscape as highly rectilinear patterns of dykes, in contrast to the serpentine medieval enclosures.

Drained land had begun to deteriorate as early as the end of the 17th century, resulting in the construction of windpumps or drainage mills. The earliest map reference to such a structure dates to 1700; by 1800 there were c 50 and the first Ordnance Survey mapping of the 1880s indicates there were 110 drainage mills in the Broads (Williamson 2006), creating a distinctive landscape. Drainage was improved by the arrival of the steam pump in the mid 19th century, although they didn't replace the ubiquitous windmills until the 20th century, later. Steam pumps were ultimately replaced by electric pumps much later.

The 20th century saw some dramatic changes to reclaimed land in East Anglia. Much drained land was progressively abandoned such as the area around the Blyth and Minsmere Levels. The latter was a form of defence against enemy incursions during World War II, although agricultural recession played a large role in this overall process.

The second half of the 20th century saw a reversal of fortunes and much of the remaining grazing marsh was converted to arable. This mainly occurred after the disastrous floods of 1953 which had inundated much reclaimed land in East Anglia. Subsequently sea walls were raised and pumps widely installed, transforming the landscape once again.

VALUES AND PERCEPTIONS

Reclamation has dramatically shaped the coastal landscape in this region as we know it, although this aspect of man's influence can often be overlooked. In some cases reclaimed land has been assigned great cultural and historical value in the East Anglian region. Drained marsh is the dominant land cover in the Broads. Dykes and existing drainage mills can be hundreds of years old and are distinctive features of the East Anglian landscape.

The most notable example of this is Halvergate Marshes which remained grazing marsh until the 1980s when they came under threat from deep draining for conversion to arable. This resulted in a campaign of direct action by Friends of the Earth which culminated in the establishment of the country's first Environmentally Sensitive Area (ESA). Landowners are now reimbursed for carrying out traditional grazing on the land. Sizewell, Bells and Tinkers Marsh are also managed in a traditional way.



Reclaimed grazing marsh is also an important habitat for breeding waders and wildfowl. The transition from brackish to fresh water within dykes also provides a great deal of environmental interest (Williamson 2005, 43).

Traditional grazing marsh at Orfordness

RESEARCH, AMENITY AND EDUCATION

Reclaimed land has proved a great amenity in the past, providing extra fertile land at times when it was much needed. It continues to be an important element of the modern day agricultural industry in East Anglia.

Some research has been conducted into the history of reclaimed land and this area has been extensively covered by Tom Williamson at the University of East Anglia. However archaeological discoveries continue to add to our knowledge of this landscape. The recent NMP survey in coastal Suffolk identified the remains of numerous sea walls used in drainage and rendered redundant by further reclamation (Williamson 2005, 30).

There is a great deal of potential for using reclaimed land in an educational context. This particular landscape type brings together examples of sustainability and loss. It leaves visible historical depth in the landscape and involves economics and engineering.

CONDITION AND FORCES FOR CHANGE

Reclaimed land in East Anglia is in varying condition, much has been lost and some is rapidly shrinking through drainage. In other cases some areas of reclaimed land are still being used in their traditional context, such as Halvergate Marsh.

One of the main forces for change of this character type is the changing climate. In particular rising sea levels and erosion in this area are leading to further loss of reclaimed land and reversion to saltmarsh.

The intensification of agriculture continues to have an impact on land use, with much grazing marsh abandoned in favour of ploughing for arable or vegetable production.

Similarly development pressure means that land use can change from agricultural altogether.

RARITY AND VULNERABILITY

Coastal grazing marsh is becoming rare with c. 300,000 ha in the entire UK. Reclaimed land and particularly grazing marsh is exceptionally vulnerable to processes of climate change. The government is attempting to deal with rising sea levels via the creation of certain management strategies, identified through processes such as Shoreline Management Plans (SMPs). The strategy of 'managed retreat' has become particularly popular – allowing the demolition of embankments and reversion to saltmarsh.

Large areas of reclaimed marsh are also threatened by development of ports and industrial facilities. This is particularly pertinent in the area around Harwich and Ipswich (Williamson 2006, 217). Archaeological evidence of reclamation such as embankments and sea walls is also vulnerable to rising sea levels and plough damage.

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