

## 2 The Developmental History of Braunton Marsh

### 2.1 Pre-reclamation

#### 2.1.1 A Brief Geological History

Stand at any point on the Braunton Marshes to view the panorama of hills stretching clockwise from Saunton Point to Appledore, and you can begin to understand the processes that created the low-lying estuary landscape. Beneath your feet lie up to 30 metres of accumulated sediments, which have been washed down from the hilltops over millennia. However, surprisingly little research has been conducted into investigating or mapping the area's geological past.

Over the last 2 million years, the sea level fluctuated dramatically as glacial periods came and went. This profoundly affected the type and position of sediment eroded from the hills and deposited on the slopes of the estuary basin. Over shorter timescales, changes in the course of rivers have also dictated the location of alluvial deposits. Indeed, the highly fertile Braunton Great Field, adjacent to the Marshes, is said to correspond exactly to the raised river terrace left when an ancient river course deepened<sup>1</sup>. The offshore accumulation of vast quantities of rock, ground-up and carried great distances during glaciations, added further to the complex depositional patterns that betray the history of the estuary. The deposition of these sediments, swept inland by the sea, have left tell-tale evidence such as the raised beaches at Saunton Point, and almost 6 metres of sand accumulated on the slopes of Braunton's West Hill<sup>2</sup>. Today, such offshore sand reserves continue to provide the source of Braunton Burrows, which were created at some time since the end of the last glaciation, around 12,000 years ago. Potentially, the dune system may have been created as recently as around the 14th Century, when an increase in offshore sediments were forced inland through an intensification of storminess following the Little Ice Age. The formation of the dunes is central to the creation of the Braunton Marsh, creating a sheltered environment on the leeward side of the sand system, where suspended riverine sediments could settle and a saltmarsh could begin to form<sup>3</sup> (Fig 1 and 2).

The fine alluvial sediments of the Braunton saltmarsh are described prior to reclamation in a report to the Board of Agriculture by Charles Vancouver in 1808<sup>7</sup> (Box 1), who enthusiastically advocated the fertility of such soils (Box 2). Using more modern terminology, Vancouver refers to properties of a higher than average Nitrate and Phosphate content typically found in estuarine silts. Following reclamation in 1815, the fertility of the Marshes rapidly gained an excellent reputation, as indicated in an 1848 notice of sale for land on the Marsh<sup>8</sup>. However farmers do describe differences between different pastures in their cattle-fattening properties<sup>5</sup>. This is presumably as a consequence of the dramatic variation in the soils of areas now considered to be part of the Braunton Marshes. The depth and composition of sediment varies quite considerably across the area, from almost pure sand in the west,

to a reported six-foot depth of clay loam soils further east<sup>4</sup>. In many ways, the soils reveal the boundaries of the Braunton Marshes in the strictest sense, technically referring only to the pastures within the former saltmarsh in the Parish of Braunton. With the progression of time, however, the boundaries have become blurred. For example, to the east, part of the original area of Braunton Marsh, now known as 'Big Sharper' has also been bisected by the creation of a new channel in 1850, and now lies on the eastern side of Braunton Pill. Today, many areas too far north or south, such as Horsey Island, are also regularly considered to be part of Braunton Marsh.

"The soil and upper structure of this marsh, consists of a tender, rich, soapy, hazel-coloured loam, on a subsoil of silt or fine sand, below which a coarser stratum of sand occurs, and in which gradations it seems to have arisen from a dark blue, or rather black, tenacious clay or gault, the usual colour of marine or common sea mud. This Marsh is covered with a carpet or fine matting of all the plants and grasses peculiar to such situations; is subject to be occasionally submerged to a slight depth by the tidal waters, and contains by estimation about 1200 acres."

FIG 1. VANCOUVER'S 1808 DESCRIPTION OF THE SOILS OF BRAUNTON MARSH.<sup>7</sup>

"salt-marsh... when ripe and ready for embankment, is the mildest, most temperate, and permanently fruitful of any in the universe... being formed of animal and vegetable exuvia, combined with the finest particles of terrene matter the tidal waters could hold in suspension, can never fail yielding the most ample returns from all such districts rescued from the ocean."

FIG 2. VANCOUVER'S 1808 DESCRIPTION OF THE BENEFITS OF SALT-MARSH RECLAMATION.<sup>7</sup>

- 1 - Edmonds, E. A., 1972; The Pleistocene history of the Barnstaple area. Inst. Geol. Sci., Rep. 72/2
- 2 - Notes of Commander Gammon, various locations, Braunton Museum
- 3 - Parkinson, M. A., 1976; A tentative historical ecology of parts of the Taw estuary - Braunton Marsh. Trans. Devon. Assoc. 108; 37-60
- 4 - Whitley, N., 1861; On the embanking and reclamation of the marshlands of the manor of Heanton Punchardon, North Devon. Journal of Bath and West of England Society. 9; 283-295
- 5 - John Hartnoll and Owen Slade, personal communication, 2006
- 6 - Green-Pascoe Survey, 1809; Deposited Plan 17, Devon Records Office, Sowton, Exeter
- 7 - Vancouver, C., 1808; A General View of the Agriculture of the County of Devon, with observations on the means of its improvement. Report for the Board of Agriculture. Reprint 1969 (Copy held at North Devon Studies Library)
- 8 - Sale particulars, 1848; Inclledon-Webber Collection, Braunton Museum 3704M/SS



FIG 1. RELIC TIDAL GUTS ARE EVIDENT ACROSS THE BRAUNTON MARSHES



FIG 2. ACROSS THE ESTUARY, THE SALT MARSH AT ISLEY MARSH SUGGESTS HOW THE BRAUNTON MARSH MAY ONCE HAVE LOOKED

## 2.1.2 Braunton Marsh Prior to Enclosure

Agriculture has long been the primary industry for the people of Braunton. Over the past 1000 years, most farmers would have rented land and accommodation from the wealthy landowners of the area. In most cases, tenancy agreements would have included the right to graze stock on the common lands of Braunton (Appendix 2), which also included the area of the Braunton Marsh. It is also highly probable that the marshes and mud flats were also routinely used for the harvesting of cockles and seaweed at this time. The Marsh would have resembled a similar habitat to that seen today across the estuary at the Isley Marsh RSPB Reserve, and would have supported a wide variety of estuarine birds. The environment was almost undoubtedly a very hazardous one, with Parish register records reported to describe incidents of drowning at a place known as the 'stepping stones' in the marshes<sup>1</sup>.

In 1808, Charles Vancouver visited Braunton while preparing to publish a report for the Board of Agriculture<sup>2</sup>. Estimating the current value of the whole Marsh at just £10, Vancouver surmised that, upon reclamation, land could fetch up to £3 per acre<sup>2</sup>. His recommendation for the enclosure of the saltmarsh at Braunton, Velator, Wrafton and South Burrow were well received by most major landowners. Soon after Vancouver's initial suggestion was made, moves to implement the enclosure and the new drainage system were rapidly explored, and the engineer, James Green, was appointed. However, records suggest that several contentious issues over the cost and the nature of the reclamation scheme delayed proceedings (Appendix 3). Nonetheless, just 3 years after the initial suggestion of reclamation was made, work on the embankment and the enclosure of Braunton Marsh was finally able to begin. The construction work commenced under the leadership of three Marsh Commissioners, who had been appointed under the 1811 'Act for the Inclosing, Draining, and Embanking of Lands in Braunton, in the County of Devon'. The Act of Parliament instructed upon the management of all stages of the reclamation, and laid out all of the responsibilities and powers of the Commissioners to oversee the construction work. The Act also determined what was to occur after the completion of the works, stipulating that the role of the Commissioners should revert to the responsibilities of one or more Marsh Inspectors, who would oversee the maintenance and management of the Marshes (For details of the role of the Marsh Inspectors see Appendix 5).

1 - Notes of Commander Gammon, various locations, Braunton Museum

2 - Vancouver, C., 1808; A General View of the Agriculture of the County of Devon, with observations on the means of its improvement. Report for the Board of Agriculture. David and Charles. (Reprint 1969) (Copy held at North Devon Studies Library)

## 2.2 Post-reclamation

### 2.2.1 Construction Work and the Financing of the First Reclamation, 1811-1815

Unfortunately, details from 1811 until the completion of the works are very patchy, with research uncovering few indications of the embankment's construction phase or financial records. Despite this, occasional extracts from various documents do help to paint a hazy picture of the time, the details of which can be found in Appendix 4. Essentially, it appears that the construction works were divided into sections, with those landowners, who would gain direct benefit, lending the money for the works. The loans would be paid back from the proceeds made from selling various plots of land after the reclamation was complete. Details of one phase of construction show that tenants temporarily paid reduced rents during the period of construction work, but were expected to pay the interest on money loaned by their landlord for improvements to the land they were renting. After completion of the work, tenants were also expected to pay a lump sum, corresponding to the increased value of the land and the length of their lease. Both tenants and landowners, therefore, each had a vested interest and were watchful of the costs paid by the Commissioners for the enclosure and drainage works.

Records suggest that work on the embankments had progressed rapidly by 1813 and, in September 1813, around the time of the highest annual tides, the first sales of land on the Marsh were held, followed by two more in 1814. The allotment of land to the holders of Common Rights on the Marsh, and the instigation of the first drainage charges by the Marsh Inspectors in 1815, signified the final stages of reclamation work had been completed (Appendix 5). Sadly, there are no accounts of the ultimate cost of the combined works, although an early estimate made by Green in 1809 stated that reclamation could not be undertaken for less than £20,000<sup>1</sup> (calculated as equivalent to £1,156,807.46 against the 2005 Retail Price Index<sup>3</sup>). A secondary source also reported that the proceeds from the sale of lands amounted to around £25,000<sup>2</sup>, although this remains unconfirmed by the primary sources accessed for this study.

1 - Extracts from the Diaries of Philip Roger Webber, Braunton Museum

2 - Parkinson, M. A., 1976; A tentative historical ecology of parts of the Taw estuary – Braunton Marsh. Rep. Trans. Devon. Assoc. Advmt Sci 108; 37-60

3 - Officer, L. H., 2006; Purchasing Power of British Pounds from 1264 to 2005. MeasuringWorth.com



## 2.2.2 The Second Reclamation, 1853-1857

After the first reclamation, the main quay was at Wrafton. The remains of a sea or harbour wall is positioned to the west of the railway underpass (now the Tarka Trail) on the western edge of the village. Until a few years ago, it is reported that the metal hooks for boat moorings could still be seen<sup>1</sup>. The route to the original pill followed a winding channel, and was of insufficient depth for larger vessels. The records suggest a long-standing desire to develop a new quay along the Braunton Pill, which would be capable of mooring larger vessels. Despite the efforts made by the Marsh Inspectors to pursue this goal in the early 1840s, the development of the new quay at Braunton was not destined to occur until after the Heanton Estate was sold to the Williams family around 1850.



THE STRAIGHTENED SECTION OF THE BRAUNTON PILL, ALSO KNOWN AS THE 'NEW CUT'



THE OLD SEA WALL AT WRAFTON

In January 1853, the Williams' Estate revealed an ambitious plan for further reclamation of tidal lands of both Velator and Wrafton Marsh, to include the straightening of the Braunton Pill. Despite the misgivings of the engineer, Nicholas Whitley, the enclosure of 'a barren patch of sand' at Horsey Island was also undertaken. The details of this important phase of the development and diversification of the area surrounding, and influencing, the Braunton Marsh, are contained in Appendix 6. Details include the significant difficulties encountered by the construction of embankments on areas of quicksand, the structure of the banks, the necessity for land drainage, agreements with the Marsh Inspectors, and the overall cost, which totalled around £18,000 (calculated as equivalent to £1,110,958.38 against the 2005 Retail Price Index<sup>2</sup>). The reclamation and the straightening of the Pill were completed in 1857.

In fact, the overall venture to reclaim further agricultural land does not appear to have provided a substantial return on the Williams' Estate investment. Further insult may have been added to this injury, when the newly reclaimed lands were subsequently divided by the new Barnstaple to Ilfracombe railway line, which opened in 1874. However, along the recently straightened section of the Braunton Pill, the Williams' Estate also invested in the long-awaited new quay at Velator, which is thought to have been completed in 1870. It is probable that the diversification and the economic opportunity created by the construction of the new quay may have proved a more profitable enterprise. Unfortunately for the Williams' Estate, by the mid 1870s, expensive maintenance works were already necessary to protect the Western end of the Horsey Embankment through the construction of a stone groyne. Further expense was also required in order to strengthen parts of the new straightened embankments of the Braunton Pill, which were built on quicksand and already beginning to subside.

1 - Owen Slade, personal communication, 2006

2 - Officer. L. H., 2006; Purchasing Power of British Pounds from 1264 to 2005. MeasuringWorth.com



THE REMAINS OF A SHOOTING BRIDGE ACROSS DUCKPONDS NOW FOUND ON THE SITE OF THE ORIGINAL BRAUNTON PILL; A SITE BELIEVED TO HAVE HELPED INSPIRE HENRY WILLIAMSON'S "TARKA THE OTTER". THE REED BEDS FOUND HERE ARE ALSO BELIEVED TO HAVE BEEN HARVESTED FOR THATCHING. TOGETHER WITH THE EXPANSION OF TRADE CREATED BY THE NEW QUAY AT VELATOR, SHOOTING AND REED PRODUCTION DEMONSTRATE THE ECONOMIC DIVERSIFICATION ENABLED BY THE STRAIGHTENING OF THE ESTUARY CHANNEL.