

## Appendix 1 - Glossary

AONB	Area of Outstanding Natural Beauty. A statutory designation whose purpose is to conserve and enhance the natural beauty of the area.	Managed retreat/realignment	The practice of returning areas of land, previously protected by sea defences, to a more natural, tidal environment in line with the demands of sea-level rise.
BAP	Biodiversity Action Plans. A series of national, regional and local action plans committed to the preservation of habitats and species in response to the 1992 Convention on Biological Diversity.	Penstock	An adjustable sluice used to control the flow of water into and out of the drainage system.
Braunton Marsh	Area of Common land (Braunton Parish) subject to tidal inundation prior to enclosure.	Pill	A large tidal creek or channel.
Braunton Marshes	Collective name for the numerous individual pastures created after first enclosure of the Braunton Marsh.	Poaching	The trampling and churning up of damp or wet soils by livestock.
CAP	Common Agricultural Policy. System of European agricultural subsidies.	Pot Wallowing	The annual tradition of re-banking the stones from the base of the pebble ridge at Westward Ho.
Defra	Department for Environment, Food and Rural Affairs.	SSSI	Site of Special Scientific Interest.
Dykes	A local term for drainage ditches, corrupted from the Dutch 'Dijks' (which actually refers to the embankments rather than to the water channels.)	Staff hook	A short-handled implement with curved blade, used for hedging.
Gut	Small tidal creek or channel.	Talet	The hay loft in a Linhay.
IUCN red list	A comprehensive inventory of threatened species compiled by the International Union for Conservation of Nature and Natural Resources.	Taxon	A distinct grouping of flora and fauna.
Linhay	An agricultural building which provided shelter for cattle.	UKMAB	United Kingdom Man and the Biosphere
		UNESCO	United Nations Educational, Scientific and Cultural Organisation.
		UNESCO International Biosphere Reserve	Sites recognized under the UNESCO Man and the Biosphere Programme, whose aim is to innovate and demonstrate approaches to conservation and sustainable development.

## Appendix 2 - Rights of Common

The Braunton Marsh has long been associated with Braunton agriculture. A 'Lease and Release' dated 1703 describes the transfer of land rights for property including 'pasture for four bullocks, 2 horses and forty sheep in the Braunton Marsh' (NDRO<sup>1</sup>). This ratio of livestock (i.e 2:1:20) is believed to represent a conventional way for the apportionment of grazing rights on Braunton common land (BM<sup>1</sup>). 'A list of Commons in Braunton Marsh' (NDRO<sup>2</sup>) produced in 1794 also corresponds to this convention, and calculated the Braunton Marsh to contain 127 ½ commons, held by major landowners across an area of just over 1031 acres. Use of the formula calculates Braunton Marsh to have theoretically provided grazing for 255 Bullocks, 127 Horses and 5100 Sheep, a tall order even for just over 1000 acres. By this reckoning it might therefore be assumed that common rights can not have been fully exploited by all tenants at all times, or that the formula did not always hold true. Indeed, court documents produced in 1795 provide evidence to suggest rights of common in the area were subject to exchange (DRO<sup>1</sup>), thus distorting the standard formula. Common rights became the basis upon which lands were allotted following reclamation of the Marsh, just 20 years later.

## Appendix 3 - Pre-reclamation

Extracts from the diaries of Mr Philip Roger Webber Esq. of Buckland, describe a meeting on January 27th 1809, conducted at the Braunton Marsh<sup>1</sup>. This is likely to have been one of the first of several meetings to discuss enclosure and embankment. Meetings were open to all those with an interest; both landowners and occupying farmers (BM<sup>3</sup>). Work progressed with the commissioning of the notable Civil Engineer James Green, a man responsible for many major engineering projects in Devon during his life-time. Under the direction of Mr Green, a survey of the area was conducted by John Pascoe, and a map produced which can still be seen today (DRO<sup>2</sup>). In September 1809, at a meeting at the Black Horse (a favoured meeting place for issues of the Marsh),

Mr Green reported that his plan for embanking the marsh from the tide could not be done for under £20,000 (BM<sup>3</sup>). The cost raised considerable concern, as stated in a letter from Lord Rolle written in response to the meeting (BM<sup>3</sup>).

On Monday August 27th 1810, almost a year on from the initial meeting at the Black Horse, a decisive meeting was called by Lord Rolle in which the majority of landowners and their tenants finally agreed to Mr Green's terms (BM<sup>3</sup>). Two separate plans were proposed, as indicated on the Green-Pascoe survey deposited with the Clerk of the Peace in Exeter in September 1810 (DRO<sup>2</sup>). The more elaborate proposal involved an embankment from Bench Hill (where the White House stands today) to the mouth of Braunton Pill. The scheme included a canal from Braunton Pill to Wrafton, around Velator Marsh and down to the location of lime kilns (now the Kiln Cottages close to today's Velator Quay). Several miles of new drains were to extend almost to Saunton Village, also cutting through parts of the Braunton Great Field. The second, alternative line of embankment is also drawn, however, approximately in the position of the current Great Bank. Sources suggest that the more grandiose plan was thwarted by the objection of the Bassett Estate (Parkinson, 1976), which was concerned about the enclosure of immature saltmarsh at Horsey - an exercise doomed to failure according to Vancouver (NDA<sup>1</sup>).

On May 25th 1811, an 'Act for the Inclosing, Draining, and Embanking Lands in Braunton, in the County of Devon' was finally approved by Royal Assent, signalling that work was finally free to begin (BM<sup>2</sup>). In the Act, three Marsh Commissioners were appointed to oversee the enclosure and drainage work, and were paid £2.12 6d. The Act sets out, in great detail, all aspects of the duties, powers and methods by which the enclosure and allotment of land were to be conducted. It also included the method of the subsequent management of the land, which was to be undertaken by Marsh Inspectors once enclosure was complete (BM<sup>2</sup>) (see also Appendix 5).

## Appendix 4 - Pre-reclamation

By 1813, significant progress with the construction of the embankment appears to have been made (NDRO<sup>3</sup>). However, it also appears that technical details of the scheme remained in a state of flux, and there was a sense of growing concern over cost. This sense of concern over cost is indicated in a communication to the Marsh Commissioners from 20 Braunton tenants and freehold farmers objecting to the erection of a lock into the interior of the marsh proposed by Mr Green, and other issues of contention (NDRO<sup>3</sup>). Increasing financial outlay is likely to have concerned both tenants and landlords, to whom the costs of the embankment, draining and enclosure were passed. Details from the Enclosure Act of 1811 help to piece together some of the financial arrangements for the reclamation. Marsh Commissioners were empowered to borrow sums up to £5 per acre for the inclosing, allotting and dividing of the Marsh, and £8 per acre for the expenses to embank and drain the Marsh (BM<sup>2</sup>). These sums were to be charged against the Marsh, with the Commissioners endowed with powers to the sell plots of the newly-enclosed marsh land from time to time, sufficient to recover the money (BM<sup>2</sup>).

Documents from the Inledon-Webber collection at North Devon Records Office show evidence of the landowners advancing money for the draining of the Braunton Meres; an area to the north of the Braunton Marsh, close to Swanpool. Landowners directly benefiting from the land drainage advanced the money, and charged their tenants annual interest, with a final payment upon completion of the project (NDRO<sup>3</sup>). This final payment was determined as a varying proportion of the improved annual value of the tenancy land upon completion of the drainage works, as inspected by two independent surveyors both before and after the drainage (NDRO<sup>3</sup>). The proportion of this increase in value was then multiplied according to the length of a tenant's lease (NDRO<sup>3</sup>).

Under an agreement dated Sept 10th 1814, a proposal by James Green for the drainage of the Braunton Mere was to be executed for the sum £785, including compensation for lands injured by the works and incidental expenses (NDRO<sup>7</sup>). Detailed plans of the drainage scheme are also included amongst the Inledon-Webber documents, specifying depths, widths and slope angles for the ditches to be cut (NDRO<sup>3</sup>). Less than a year later, and 6 months ahead of schedule, Edward Harris and John Mallett inspected and approved payment of James Green for his drainage of Braunton Meres conducted in a "good workmanlike manner", April 19th 1815 (NDRO<sup>9</sup>).

Overall, the impression gleaned from the fragmented information remaining from the time suggests an image of financial pressure, but also of an efficient and timely construction schedule. Though few indications of the financial arrangements for construction remain, details of the drainage of the Braunton Meres suggest the logic of breaking the overall project into sections, with the corresponding charges to benefit the landlords. In the absence of evidence to the contrary, it seems reasonable to suggest that this may have been the way that most, if not the whole of the construction costs, were raised.

Given the number of acres held by the Braunton Manors and other upcoming freeholders, total costs must have represented considerable sums of money even for the wealthy. Certainly, records indicate that after the completion of the works, in correspondence with the 1811 Act, three sales of land on the peripheries of the newly-reclaimed Marsh were conducted to recoup the borrowed money (MC<sup>1</sup>). Details from the Marsh Award suggest that the first sale occurred as early as September 1813, with a second in August 1814 and a third in December of the same year. Cash at this time was presumably quite scarce for some of the landowners, who had advanced the money for the works, and who were now purchasing land prior to receiving the repayment of their loans. Perhaps for these reasons, maps of the newly-allotted lands show several lots of land bought in partnership (MC<sup>1</sup>, MC<sup>3</sup>, OS<sup>1</sup>). In addition to the expense of purchase, new landowners were also responsible for the construction of various fences and hedges, to be completed within

one year of occupation (OS<sup>2</sup>). Landowners were also responsible for the ongoing maintenance of certain lengths of drains adjacent to their lands (OS<sup>2</sup>). In 1815, allotments of land were awarded to those with common rights on the Marsh, to be held for a period in accordance with existing tenancy agreements (OS<sup>2</sup>). Newly-sold plots and allotments were recorded, along with their new owners and occupiers in the Marsh Inspectors' minutes (MI<sup>1</sup>), with details of sales and plot allocation later set down and officiated in the Marsh Award of 1824 (MC<sup>4</sup>). Like the new owners of the sold Marsh lands, allotment holders were also responsible for the construction of boundary walls and for the maintenance of certain drains. Thus hundreds of tonnes of stone, horse-work and manual labour were committed, by both occupiers and owners, to construct the tens of miles of walls that still divide much of the Marsh today.

## Appendix 5 - Marsh Inspectors

One month after the completion of the works set out under the 1811 Act, the Commissioners were required to call a meeting for the nomination of Marsh Inspectors from amongst the owners and occupiers. Upon their appointment by a Justice of the Peace, the one or more Inspectors were essentially responsible for all future marsh management, holding all property in Trust on behalf of the owners and occupiers. Election of the Inspector(s) was to be held each year on Marsh 25th, also known as Lady Day. Although it does not appear to be stipulated anywhere that three Inspectors be appointed, it appears from the records that this protocol was adopted in line with the previous number of Marsh Commissioners, and the practice of appointing three Inspectors has continued to the present day. Evidence of the undertaking of Marsh Inspector duties, along with completion of listings for all new occupiers and owners on the Marsh toward the end of 1815, therefore supports the idea that all major construction works had been completed by this time.

On December 21st 1815, the first Marsh Rates were set at sixpence in the pound (MI<sup>1</sup>), on the basis of the value of the occupied land. As stipulated in the Act, rates were to be collected to help cover the salary and expenses of the upkeep the banks, cuts, drains, bridges and other works (BM<sup>2</sup>). In 1816, the total for the first rate amounted to £13.10.1¾. Under the Act, the Inspectors were entitled to collect as many rates per year as they saw fit to cover expenses, and five rates were collected in the first year, totalling £67.10.8¾, (MI<sup>1</sup>), with invoices for masons, blacksmiths, carpenters, boats of stones, timber and horse-work perhaps indicating that elements of the construction work had yet to be completely finished (MI<sup>1</sup>).

The construction and maintenance work undertaken, however, was not solely paid for by the rates of the owners and occupiers. Income also came from the sale of grass from the banks and their over-winter rental, a practice that continues to this day. 'Gate money' began to be charged for the use of the Toll Road for access to the ferry, fishing grounds or burrows (MI<sup>1</sup>). Fines and penalties were also issued over matters such as the poundage of escaped stock, trespass, and injury to the banks by livestock, horses and carts (MI<sup>1</sup>). Typical outgoings involved small payments to farmers for the cleaning of the drains and canals, the killing of rats and moles to prevent the undermining of the embankments, payment for equipment such as shovels and picks, lime for the banks and even beer for the workers (MI<sup>1</sup>). Along with the organisation of all these matters, Inspectors were also responsible under the Act for enforcing matters of good husbandry of the allotted marsh lands, including the upkeep of fences and the stipulation of precise quantities of lime or manure that must be sown should an allotment be ploughed for tillage (BM<sup>2</sup>).

## Appendix 6 - Braunton New Quay and the Enclosure of Horsey Island

After enclosure, there appears to have been a longstanding intent to develop a new quay along Braunton Pill. In 1840, three plots of land forming the Sharper Marshes were bought by the Inspectors, on behalf of the marsh owners from Thomas Scott and Robert Dyer, (MI<sup>6</sup>). In 1844, a surveyor was employed, on behalf of the proprietors, to report upon the 'probable expense of erecting a quay near the Inspectors House' (MI<sup>1</sup>). A committee was appointed to liaise with the neighbouring landowners, Joseph Davie Bassett, Esq. and Arthur Bassett, Esq regarding the proposed plans for a quay. However, the ensuing meeting, which occurred sometime in May 1844 was unsuccessful, provoking a resolution that no further actions should be taken by the Inspectors (MI<sup>1</sup>).

Nine years later, in 1853, following the sales of the Bassett Estate to Mr William Williams, Esq. in 1852, plans were proposed to straighten Braunton Pill and reclaim the remaining fringes of land left unenclosed after the first embankment. A meeting of Barnstaple Town Council in January 1853 is reported to have supported Mr Williams' proposals, on the provision that navigation was safeguarded (NDJ<sup>1</sup>). Mr Williams was instructed that the fish weirs posing a hazard (located) at the mouth of the pill, should be removed and their owners compensated, at an estimated cost of £300-£400 (NDJ<sup>1</sup>). It was also agreed that a survey of the channel be commissioned (NDJ<sup>1</sup>).

A further meeting, this time with the owners of Braunton Marsh and their representatives – the Marsh Inspectors–was called at the Fortescue Arms in Barnstaple, on the 23rd of September, at 12 noon (MI<sup>1</sup>). At the meeting, Mr Williams explained and submitted a plan (MI<sup>2</sup>) of the proposed embankment and alteration of the channel at Braunton Pill (also known as the 'new cut', which would shorten the navigable channel by half a mile (Whitley, 1861). The proprietors unanimously consented to the modifications to be paid for by the Williams Estate, upon the condition that Mr Williams would compensate the landowners for any damage caused by the cutting of the banks at Sharper (MI<sup>1</sup>), a plot of land positioned on the site of a pre-reclamation sandbank of the same name (DRO<sup>1</sup>). Mr Williams also appears to have purchased the pasture land of the Sharper Marshes from the Inspectors at this time (Whitley, 1861). The Inspectors also requested that Mr Williams extended the proposed embankment to cover an area of about 10 acres close to the Ferry House at Bench Hill which, until this point, was on the seaward side of the sea defences. In return, around 7 acres of land, forming the existing embankment of Sharper Marsh, would also be given over to Mr Williams. The details of these arrangements are contained within indentures and conveyances of the Marsh Inspectors' records, and include an agreement in 1855 that work would be completed within three years (MI<sup>6</sup>).

A major report by the engineer Nicholas Whitley reveals his initial misgiving about the hazardous undertaking of reclaiming 25 acres of barren sand (Horsey Island) (Whitley, 1861). Nonetheless, work began, and an initial call for tenders was made in the local paper, March 16th 1854 (NDJ<sup>2</sup>). Work was split into 2 contracts, both requiring the construction of large sections of embankment, one of which also included the cutting of the new channel. Further calls for subcontractors and for 200 navvies, was made in October 1854, and also for a haulier of 60,000 yards of stone from Braunton Down and other quarries (NDJ<sup>3</sup>). The financial arrangements for all concerned, however, do not appear to have always run completely smoothly. A newspaper report in August 1855 describes the case of Gammon versus Morgan, in which the plaintiff issued a claim for wages owed by a subcontractor. The subcontractor was apparently unable to pay following the bankruptcy of the principal contractor some months previously (NDJ<sup>4</sup>). Work also appears to have been disrupted by vandalism of planking and of construction materials on the Heanton embankment during 1855, with a reward of £5 being offered for information leading to the detection of the offender(s) (NDJ<sup>5</sup>). This vandalism may relate to an issue described in a later report by engineer Nicholas Whitley, stating that a 'considerable amount of local prejudice had to be overcome' (Whitley, 1861).

Whitley's report indicates that the embankment and enclosure of around 200 acres of land at Chivenor were completed in 1856 (Whitley, 1861). This was followed by completion of the works at Wrafton and finally by the enclosure of Horsey Island in 1857 (Whitley, 1861). The embankments were constructed from material dug from the inner ditch. The seaward face of the earthworks was coated with 3ft. of clay into which pitch paving was driven to a depth of between 9 to 12 inches, depending on the exposure to wave action (Whitley, 1861). Having found the local egg-shaped estuary boulders to be inferior, stones from Braunton Quarry were the preferred materials for the pitch paving of the embankments, with a geological structure causing the stone to fracture into wedge-shaped stones, which were easily driven into the clay (Whitley, 1861).

Some parts of the embankment were also being built upon pure sand, making construction work very difficult. Where the banks were built on pure sand, an extra 3ft. of clay was sunk at the foot of the bank, to prevent salt water penetrating to the other side (Whitley, 1861). Though the upper part of the straightened channel or 'new cut' was situated upon firm clay loam, further south, the embankment was positioned upon exactly this type of pure sand sediment. Described as 'perfect quicksand', pumps were required night and day to remove water welling up from a number of springs (Whitley, 1861). The channel, therefore, had to be lined with clay and the base filled with gravel to prevent scour (Whitley, 1861). Similarly, the 0.75 miles length of the Horsey embankment was built 'over quicksand where no solid rock could be touched with a 20ft. boring rod' (Whitley, 1861). Simultaneously building the Horsey Island embankments from both the eastern and western ends, the difficulties of construction on this substrate were compounded by the scouring action of the tides. Tidal scour caused considerable difficulty for progression and the completion of final stage of embankment that would permanently shut out the sea (Whitley, 1861). Finally, however, small furze faggots weighted with stones, were positioned on the construction site and existing ends of the embankment at the site of the "shut out" (Whitley, 1861). At 3 a.m. on Monday, June 15th 1857, 320 men and 140 carts (operating three abreast), together with the use of the existing trainway and barrow roads, began to infill the embankment gap, and the enclosure of Horsey Island was complete (Whitley, 1861, NDJ<sup>6</sup>). Despite the difficulties, the works were completed well within the three-year allowance (MI<sup>7</sup>), with the embankment costing £13,394, around £300 under the estimate (Whitley, 1861). As with the initial reclamation, however, further expense continued long after the initial construction works were complete.

### Demands of the Inspectors

In 1857, after the completion of the enclosure, a further agreement between the Inspectors and Mr Williams was made to determine the several maintenance responsibilities and the entitlements of the Williams' Estate (MI<sup>7</sup>). Provision of freshwater south east of Velator, was to be ensured by the Williams' Estate, with liberty being given to alter and improve the flow and controls of the water at or near Velator Bridge as appropriate (MI<sup>7</sup>). It was also dictated that it was the responsibility of the Williams' Estate to ensure the provision of 'proper and sufficient' embankment so as to prevent the breaching of the banks on high tides into the canal and road by Sharper, in order to maintain the quality of its water for cattle (MI<sup>7</sup>).

With regard to the provision of water to Horsey Island, it was determined that a control should be built to raise the water level, and a system of pipe work constructed to divert any excess water through the original embankment and under the original river bed (MI<sup>7</sup>). Should the water fail to flow, water for livestock could be taken from the drains next to the Toll House. Mr Williams, his heirs and his tenants were granted freedom from tolls, and permitted to create a road across the Great Bank at a position now known as the 'Crossing Banks'. Fortuitously, a shingle bank on the now enclosed Horsey Island provided a convenient supply of a

material appropriate for the job (Whitley, 1861). Maintenance of both the road and the bank in this area was deemed to be the responsibility of the Estate, and an annual rent of £2 was paid for the land, again a practice that continues to this day. Upon non-payment of rent or the failure to perform maintenance within a period of 28 days, the Marsh Inspectors were thereby entitled to recover the costs from within the lands of Horsey Island and Broadlands (MI<sup>7</sup>).

It was also determined that a boundary wall of 4 ½ ft. in height should be built 40 ft. from the foot of the Great Bank dividing Horsey Island from the land of the Braunton Marsh (MI<sup>7</sup>). This wall had to be completed within one year (MI<sup>7</sup>). The south-western section of the Island, which remained the possession of the Marsh Inspectors, was also to be divided, by means of the wall. Permission was granted that material might be taken from this area (subject to a compensation payment) for any repair to the banks (MI<sup>7</sup>). However, upon a later agreement in 1858, this land was exchanged for the western portion of the Sharper Marsh, now known as Little Sharper (MI<sup>8</sup>). Within this agreement, it was permitted that sufficient stones to build the walls might be taken from the Great Bank, with any surplus stones purchased for the sum of £20, provided that sufficient stone was left in order that the Marsh Inspectors could build two fences across the embankments and road as they saw fit (MI<sup>7</sup>).

### Additional Works and Final Costs

In addition to the works required by the Inspectors, several other outlays were also necessary after the enclosure. A further five miles of stone wall were built to divide the enclosed land into sections of approximately 10 acres each, and these were subdivided by a 5-strand wire fence joined by oak posts, with larch top-bars (Whitley, 1861). Several linways were also built at a cost of £45 each. In addition, field drainage was also necessary, as the reclaimed land was 'much broken up by pools and small channels', and cost in the region of £4 per acre, over the whole of the 400 acres reclaimed (Whitley, 1861). The sward (surface layer of soil and vegetation) was disturbed as little as possible in this process, on account of the variable depth of this fertile surface layer across the marsh. However, where barren sand had been reclaimed, between 200-400 loads per acres of alluvium were transported, in order to render the land productive (Whitley, 1861). Guano was also sown into the old sward with no effect, but where it was sown onto the sand coated with soil, it produced very vigorous grass growth (Whitley, 1861). Special marsh-land grass seed was purchased from London at a cost of 30s. per acre, but this seed was found to fare no better than ordinary grass seed at a cost of 10s. per acre, providing a considerable saving (Whitley, 1861). In total, additional costs amounted to just over £4000. The overall total cost was estimated by Whitley to be in the region of £18,000 (Whitley, 1861).

Subsequent to these reclamation works a new quay was constructed along the newly straightened and deeper channel. This development is believed to have been completed in 1870 (NDJ<sup>9</sup>). Completion of the new quay allowed for considerable development and diversification of trade in the Braunton area. This is quite possibly one of the prime economic benefits of the reclamation works, considering the difficulty of the scheme and a relatively meagre return on the agricultural land improvement. The quay was now able to cope with much larger vessels, trading in lime, coal and also transporting locally produced crops. Similarly, in the true spirit of sustainability and entrepreneurialism, the area of the original channel was now employed for the purposes of fishing, shooting, and reed production. Even today, the shooting rights across this area continue to provide a worthwhile income for the landowner. Unfortunately for the Williams' Estate, however, evidence suggests that this second phase of reclamation had not run as smoothly in the long term as the works completed in 1815. By the early 1870s, detailed plans, and an extract from a report by the engineer Sir John Coode, indicate that it had become necessary to protect the Western end of the Horsey embankment, close to the site of the final shut out of the sea. This was achieved by means of a 60ft stone groyne, with a recommendation for a second groyne at the eastern end of the embankment (NDRO<sup>13, 15</sup>). A further letter, dated 1875, also indicates a significant 'running sand' problem at the site of the New Cut, which was causing the stone pitching of the banks to subside (NDRO<sup>14</sup>). Again, the engineer Sir John Coode was enlisted to help to rectify the problem,

and he suggested either the use of faggotting, or reducing the angle of the embankment, in order to resemble parts of the bank further south west. Despite stating the use of faggots was the ideal solution, and in the absence of suitable materials for faggots in the neighbourhood, Sir John Coode recommended the more pragmatic option of flattening the angle, thus allowing the reuse of the existing stones for pitching, (NDRO<sup>14, 15</sup>).

## Appendix 7 - A Brief Outline of Repair to the Horsey Embankments following the 1910 Storm

A dam was constructed to the seaward side of the deepest breach, using concrete foundations, wood pilings and bags of concrete filling. The objective was to impound water within the area of Horsey Island itself to a level constant with that of the neap tide, thus reducing the amount of tidal scour which constantly exacerbated the size of breaches. The Horsey sluice was therefore shut on each ebb tide, and a hand-worked penstock erected on the inlet side of the sluice to help control the water level (NDRO<sup>18</sup>). After the area was eventually excluded from the sea, and following subsequent scour, the wing walls on either side of the sluice were pulled down and replaced, and the banks to the side protected with rough stone pitching.

To repair the breaches several techniques were used. A 75 ft. barge was sunk into position at the site of the first breach, but unfortunately was found to produce a large amount of scour and the breach subsequently eroded further before stone, clay and foreshore material could be packed around it. Three further barges, each around 38ft in length, were sunk into breach three, the second largest breach. The sand dredger 'Nancy' was used to pump sand from the foreshore into the breaches. Nancy was also used to remove the sand deposits now spread across the surface of Horsey Island, which in total amounted to 36,890 cubic yards. The sand was used to fill a hole behind breach three, and also for the landscaping of two decoy duck ponds positioned on the inward side of the embankment adjacent to breaches one and three. Wooden gantries above the breaches and a railway along the bank were also constructed to assist with filling the breaches. The existing groynes were repaired and new ones built to help increase the eroded level of the foreshore. Stone pitching along the embankment was removed and replaced, and leaks in the newly repaired embankment secured by filling a trench on the outer toes of the embankment with puddle clay.

Despite carefully considered plans, and measures to minimise further damage and erosion to the site of repairs, details from the final report reveal that the repair work took considerably longer, was far more difficult and costly than originally anticipated, and seemed plagued with damage from further storms that continually set back the work. In fact, over two months later than the seven months originally estimated for completion of the work, and with no end in sight, the contractor W.G. Gradwell ended their contract to complete their repairs (NDRO<sup>18</sup>). Following this, several other contractors approached also refused to consider the work, and it was decided by the Trustees of the Williams' Estate that the repairs should be completed under administration (NDRO<sup>18</sup>).

According to the notes made by local historian Commander Gammon in the latter quarter of the Twentieth Century, the breaches of the Horsey Embankment significantly depleted the Williams' Estate fortune, and led to the sale of 3 Estate farms, including Broadgate around 1812 (BM<sup>1</sup>). Unfortunately, the primary sources of this material have not been located, however it is understood that Mr Gammon had access to many private documents over the many years of his research into Braunton's history. A further enigma is the location of an original series of photographs, made at the time of repairs, which are believed to have once hung in the offices of Pitts Tucker Solicitors. Only one set of poor quality images remains (BM<sup>4</sup>), but shows dramatic photographs of the several washouts, the outflow of impounded water through the breach, gantry, sand dredger and railway constructed along the embankment to supply repair materials.

## References/List of Archive Resources

Please note that a large amount of archive material has been electronically scanned, photographed, or photocopied during the process of this study. Due to space restrictions, not all items have been referenced or referred to within this report. However, the compilation of this material is available through the North Devon Records Office. For audio material of interviews with Marsh landowners, please contact the Taw Torridge Estuary Forum.

## Primary Sources

### Braunton Museum (BM)

- BM<sup>1</sup> Notes of Commander Gammon, various locations, Braunton Museum
- BM<sup>2</sup> Act for Inclosing, Draining and Embanking Lands in the County of Devon, 1811 (Box 25)
- BM<sup>3</sup> Extracts from the Diaries of Philip Roger Webber, Braunton Museum
- BM<sup>4</sup> Photocopies of photographs made at time of Horsey repairs (Box 25)
- BM<sup>5</sup> An agreement between the Wraughton Commoners, George Newcombe and the tenants of Braunton Marsh Sea Banks, 1844 (Box 16)
- BM<sup>6</sup> County Court of Devonshire, Judgement by his Honour Judge W. B. Lindley, 1932 (Box 16)

### Devon Records Office (DRO)

- DRO<sup>1</sup> Court papers from the Courtenay Estate regarding a boundary dispute at Vellator Marsh, Braunton, 1795; L1508/EL/Court/67
- DRO<sup>2</sup> Green-Pascoe Survey, 1809; Deposited Plan 17
- DRO<sup>3</sup> Record of Benjamin Baker 1797; 56/11/1/59
- DRO<sup>4</sup> Letters from J L Snow, 1877; Anstey and Thompson of Exeter High Bray Estate, Braunton 1926 B/A/E/8/2

### Marsh Inspectors documents (MI)

(Courtesy of the Marsh Inspectors; Rowland Dibble, John Hartnoll, Owen Slade)

- MI<sup>1</sup> Marsh Inspectors Minute Book 1
- MI<sup>2</sup> Marsh Inspectors Minute Book 2
- MI<sup>3</sup> Marsh Award Map 1824
- MI<sup>4</sup> Marsh Award 1824
- MI<sup>5</sup> William Williams plan for the embankment and enclosure of Horsey Island 1853
- MI<sup>6</sup> Indentures and conveyances between the Inspectors and William Williams regarding the Horsey Embankment 1855
- MI<sup>7</sup> An Indenture between the Inspectors and William Williams regarding duties of watercourse maintenance, boundary construction and access rights 1857
- MI<sup>8</sup> An Agreement with the Marsh Inspectors 1858
- MI<sup>9</sup> Invoice from Fred Smith for weed cutting, 1950
- MI<sup>10</sup> Letter from Dorothy Squire to the Marsh Inspectors, 1970
- MI<sup>11</sup> Schedule of condition of the Ferry House, Oliver & Sons, 1942
- MI<sup>12</sup> Marsh Inspector accounts 1946-1948
- MI<sup>13</sup> Insurance documents for the Marsh Inspectors properties, 1923
- MI<sup>14</sup> Two letters from Mr Slee regarding ownership of lands between the canal and public highway at Velator, 1933
- MI<sup>15</sup> Letter from Pitts tucker Solicitors regarding lands recently sold to Mr Isaac and Sons, 1930
- MI<sup>16</sup> Letter from Barnstaple Rural District Council to the Marsh Inspectors regarding a proposed sewage works to discharge into the Marsh drainage system, 1937

### North Devon Atheneum (NDA)

- NDA<sup>1</sup> 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, David and Charles

### North Devon Records Office (NDRO)

- NDRO<sup>1</sup> Lease and Release, 1703; 2239B add8/121
- NDRO<sup>2</sup> A list of Commons on Braunton Marsh, 1794; Incledon-Webber Collection, 3704M/SS/11
- NDRO<sup>3</sup> Statement from several farmers to the Marsh Commissioners to object to a lock proposed by Mr Green, 1814; Incledon-Webber Collection, 3704M/SS 14
- NDRO<sup>4</sup> Letter by Edward Harris, 1814; Incledon-Webber Collection, 3704M/SS 6
- NDRO<sup>5</sup> An agreement signed by tenants and Landlords for the improvement of the Braunton Mezes. Incledon-Webber Collection, 3704M/SS 4a

- NDRO<sup>6</sup> Letter from Richard Dyer to Lord Rolle regarding interest payments fro land held under Baliol College, 1814; Incledon-Webber Collection, 3704M/SS 5
- NDRO<sup>7</sup> An agreement made with James Green and landowners, for the drainage of the Braunton Meres, 1814; Incledon-Webber Collection, 3704M/SS 11
- NDRO<sup>8</sup> Specification of the proposed manner of the draining of the Braunton Meres, 1814; Incledon-Webber Collection, 3704M/SS/ 12
- NDRO<sup>9</sup> Certification of inspection for work done in Braunton Meres, 1815; Incledon-Webber Collection, 3704M/SS 10
- NDRO<sup>10</sup> Campbell Watercolours, B278/1
- NDRO<sup>11</sup> Sale particulars, 1848; Incledon-Webber Collection, 3704M/SS
- NDRO<sup>12</sup> Excerpt from notebook regarding St. Annes Chapel, no date; Incledon-Webber Collection, 3704M/SS
- NDRO<sup>13</sup> Extract from the Report of Sir John Coode, 1875; B170/39
- NDRO<sup>14</sup> Letter to Reginald Glanville Esq (Williams Estate, Truro) from Sir John Coode, 1875; B170/39
- NDRO<sup>15</sup> Frank T Hussey (Surveyor), 1875; Cross-sections of the New Cut and proposed groyne. The Manor Office, Wrafton, 1875; B170/39
- NDRO<sup>16</sup> Contract for the works of repair to Horsey Embankment, River Taw, Devon, 1811; B170 add/128-131
- NDRO<sup>17</sup> W. J. Douglas, 1813; Financial Statement for the works of repair to Horsey Embankment, River Taw, Devon. B170 add/123-131
- NDRO<sup>18</sup> W. J. Douglas, 1813; Précis of the disaster and repairs to Horsey Embankment, River Taw, Devon. B170 add/123-131
- NDRO<sup>19</sup> W. J. Douglas, 1811; Plans and longitudinal sections of the breeches to the Horsey Embankment. B170 add/123-131

### North Devon Journal Herald

(Archive held at North Devon Records Office)

- NDJH<sup>1</sup> Article, North Devon Journal Herald issue; 21.01.1853
- NDJH<sup>2</sup> Advertisement, North Devon Journal Herald issue; 16.03.1854
- NDJH<sup>3</sup> Advertisement, North Devon Journal Herald issue; 19.10.1854
- NDJH<sup>4</sup> Court proceedings, North Devon Journal Herald issue; 09.08.1855
- NDJH<sup>5</sup> Offer of reward, North Devon Journal Herald issue; 04.10.1855
- NDJH<sup>6</sup> Article, North Devon Journal Herald issue; 18.06.1857
- NDJH<sup>7</sup> Article, North Devon Journal Herald issue; 22.12.1910
- NDJH<sup>8</sup> Article, North Devon Journal Herald issue; 11.11.1937
- NDJH<sup>9</sup> Article, North Devon Journal Herald issue; 28.08.1932
- NDJH<sup>10</sup> Article, North Devon Journal Herald issue; 12.01.1933

### Miscellaneous

- OS<sup>1</sup> Copy of the Map or Plan of Braunton Marsh, Vellator Marsh, Part of South Burrow, in the Parish of Braunton in the County of Devon as allotted and divided by the Commissioners under the Act of Enclosure and of the Canals, Bridges, Watercourse, and other works thereon. John Pascoe Surveyor, 1815; Courtesy of Owen Slade, Heddon Mill Farm, Braunton
- WMN<sup>1</sup> Article, Western Morning News; 09. 12. 1960; Strange and sombre attraction of Braunton Marsh, by A. J. Butcher

## Secondary Sources

- Edmonds, E. A., 1972; The Pleistocene history of the Barnstaple area. Inst. Geol. Sci., Rep. 72/2
- 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
- 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

# Braunton Marsh Species List

## Plants

List based on:

- Knight, L, 1997; Braunton Marshes Conservation Survey 1996.
- Environment Agency, Devon Area Internal Report.

- Survey of flowering plants at Horsey Island conducted on by R Hodgson on behalf of the Devonshire Association, Sept 2004

- Personal communications; Maranda Coleman-Cooke, Mary Breeds.

\* = Horsey Island only

Agrimony	<i>Agrimonia eupatoria</i>
Alga	<i>Enteromorpha (sp. indet)</i>
Alga (blanket weed)	<i>Cladophora (sp. indet)</i>
Amphibious bistort	<i>Polygonum amphibium</i>
Annual meadow-grass	<i>Poa annua</i>
Annual sea-blite*	<i>Suaeda maritima</i>
Autumn lady's-tresses	<i>Spiranthes spiralis</i>
Autumnal hawkbit	<i>Leontodon autumnalis</i>
Barren brome	<i>Anisantha sterilis</i>
Betony	<i>Betonica officinalis</i>
Bittersweet / Woody nightshade	<i>Solanum dulcamara</i>
Black medick	<i>Medicago lupulina</i>
Black nightshade	<i>Solanum nigrum</i>
Blackthorn	<i>Prunus spinosa</i>
Bloody crane's bill	<i>Geranium sanguineum</i>
Blue-fruited water-starwort	<i>Callitriche obtusangula</i>
Bramble / Blackberry	<i>Rubus fruticosus agg.</i>
Branched bur-reed	<i>Sparganium erectum</i>
Bristly oxtongue	<i>Picris echioides</i>
Broad-leaved dock	<i>Rumex obtusifolius</i>
Broad-leaved everlasting-pea*	<i>Lathyrus latifolius</i>
Broad-leaved pondweed	<i>Potamogeton natans</i>
Broad-leaved willowherb	<i>Epilobium montanum</i>
Brooklime	<i>Veronica beccabunga</i>
Brookweed	<i>Samolus valerandi</i>
Buck's-horn plantain	<i>Plantago coronopus</i>
Bulbous buttercup	<i>Ranunculus bulbosus</i>
Bulbous rush	<i>Juncus bulbosus</i>
Canadian pondweed	<i>Elodea canadensis</i>
Cat's-ear / Common catsear	<i>Hypochaeris radicata</i>
Celery-leaved buttercup	<i>Ranunculus sceleratus</i>
Cleavers	<i>Galium aparine</i>
Cock's-foot	<i>Dactylis glomerata</i>
Common bent	<i>Agrostis capillaris</i>
Common bird's-foot-trefoil	<i>Lotus corniculatus</i>
Common centaur	<i>Centaureum erythraea</i>
Common comfrey	<i>Symphytum officinale</i>
Common cord-grass	<i>Spartina anglica</i>
Common couch	<i>Elytrigia repens</i>
Common duckweed	<i>Lemna minor</i>
Common field-speedwell /	
Buxbaum's speedwell	<i>Veronica persica</i>
Common fleabane	<i>Pulicaria dysenterica</i>
Common glasswort*	<i>Salicornia europaea</i>
Common knapweed / Black	
knapweed / Hardhead	<i>Centaurea nigra</i>
Common male fern	<i>Dryopteris filix-mas</i>
Common mouse-ear	<i>Centaureum fontanum</i>
Common nettle / Stinging nettle	<i>Urtica dioica</i>
Common polypody	<i>Polypodium vulgare</i>
Common ragwort	<i>Senecio jacobaea</i>
Common reed	<i>Phragmites australis</i>
Common restharrow / Rest-harrow	<i>Ononis repens</i>
Common spike-rush	<i>Eleocharis palustris</i>
Common stork's bill	<i>Erodium cicutarium agg.</i>
Common water Starwort	<i>Callitriche stagnalis</i>
Corn spurry	<i>Spergula arvensis</i>
Cow parsley	<i>Anthriscus sylvestris</i>
Creeping bent / Fiorin	<i>Agrostis stolonifera</i>
Creeping buttercup	<i>Ranunculus repens</i>
Creeping cinquefoil	<i>Potentilla reptans</i>
Creeping thistle	<i>Cirsium arvense</i>
Crested dog's tail	<i>Cynosurus cristatus</i>
Crucifer	<i>Cardamine (sp. indet)</i>
Cuckooflower / Lady's smock/	
Milk-maids	<i>Cardamine pratensis</i>
Cut-leaved crane's-bill	<i>Geranium dissectum</i>
Daisy	<i>Bellis perennis</i>
Dandelion	<i>Taraxacum agg.</i>
Distant sedge	<i>Carex distans</i>
Dove's-foot crane's-bill	<i>Geranium molle</i>
Dwarf thistle	<i>Cirsium acaulon</i>
Elder	<i>Sambucus nigra</i>
Equal-leaved knotgrass	<i>Polygonum arenastrum</i>
False fox-sedge	<i>Carex otrubae</i>
False oat-grass	<i>Arrhenatherum elatius</i>
False-brome / Wood false-brome	<i>Brachypodium sylvaticum</i>
Fat-hen	<i>Chenopodium album</i>
Fen bedstraw	<i>Galium uliginosum</i>
Fennel pondweed	<i>Potamogeton pectinatus</i>
Field horsetail / Common horsetail	<i>Equisetum arvense</i>

Field rose	<i>Rosa arvensis</i>
Field woundwort	<i>Stachys arvensis</i>
Floating sweet-grass / Flote-grass	<i>Glyceria fluitans</i>
Fool's water-cress	<i>Apium nodiflorum</i>
Foxglove	<i>Digitalis purpurea</i>
Gipsywort	<i>Lycopus europaeus</i>
Glasswort*	<i>Salicornia agg.</i>
Goat's-beard	<i>Tragopogon pratensis subsp. minor</i>
Gorse/furze	<i>Ulex europaeus</i>
Great willowherb	<i>Epilobium hirsutum</i>
Greater Bird's-foot-trefoil	<i>Lotus pedunculatus</i>
Greater plantain / Rats-tail plantain	<i>Plantago major</i>
Greater pond sedge	<i>Carex riparia</i>
Greater reedmace	<i>Typha latifolia</i>
Greater sea-spurrey*	<i>Spergularia media</i>
Grey club-rush / Greyish bulrush /	
Glaucous club-rush	<i>Schoenoplectus tabernaemontani</i>
Grey willow	<i>Salix cinerea</i>
Ground elder	<i>Aegopodium podagraria</i>
Hard rush	<i>Juncus inflexus</i>
Hart's-tongue / Hartstongue Fern	<i>Phyllitis scolopendrium</i>
Hawthorn	<i>Crataegus monogyna</i>
Hazel	<i>Corylus avellana</i>
Hedge bindweed	<i>Calystegeia sepium</i>
Hedge mustard	<i>Sisymbrium officinale</i>
Hemlock water-dropwort	<i>Oenanthe crocata</i>
Hemp-agrimony	<i>Eupatorium cannabinum</i>
Hoary ragwort	<i>Senecio erucifolius</i>
Hoary willowherb / Small-flowered	
willowherb	<i>Epilobium parviflorum</i>
Hogweed	<i>Heracleum sphandilium</i>
Homed pondweed	<i>Zanichellia palustris</i>
Honeysuckle	<i>Lonicera periclymenum</i>
Ivy	<i>Hedera helix</i>
Ivy-leaved duckweed	<i>Lemna trisulca</i>
Jointed rush	<i>Juncus articulatus</i>
Knot-grass	<i>Polygonum aviculare</i>
Knotted hedge-parsley	<i>Torilis nodosa</i>
Lady fern	<i>Adiantum filix-femina</i>
Lady's bedstraw	<i>Galium verum</i>
Least duckweed	<i>Lemna minor</i>
Lesser burdock / Burdock	<i>Arctium minus</i>
Lesser hawkbit	<i>Leontodon saxatilis</i>
Lesser pondweed	<i>Potamogeton pusillus</i>
Lesser stitchwort	<i>Stellaria graminea</i>
Lesser swine-cress / Slender	
wart-cress / Lesser swine's-cress	<i>Coronopus didymus</i>
Lesser Trefoil / Lesser Yellow Trefoil	<i>Trifolium dubium</i>
Lesser water parsnip	<i>Berula erecta</i>
Long-bracted sedge	<i>Carex extensa</i>
Lords and ladies / Cuckoo Pint /	
Wild Arum	<i>Arum maculatum</i>
Marsh arrowgrass	<i>Triglochin palustre</i>
Marsh bedstraw	<i>Galium palustre subsp. palustre</i>
Marsh cudweed / Wayside cudweed	<i>Gnaphalium uliginosum</i>
Marsh foxtail	<i>Alopecurus geniculatus</i>
Marsh horsetail	<i>Equisetum palustre</i>
Marsh Pennywort / Whiterot	<i>Hydrocotyle vulgaris</i>
Marsh speedwell	<i>Veronica scutellata</i>
Marsh thistle	<i>Cirsium palustre</i>
Marsh woundwort	<i>Stachys palustris</i>
Meadow barley	<i>Hordeum secalinum</i>
Meadow buttercup	<i>Ranunculus acris</i>
Meadow vetchling	<i>Lathyrus pratensis</i>
Meadow-sweet	<i>Filipendula ulmaria</i>
Moss	<i>Amblystegium riparium</i>
Moss	<i>Campylium polygamum</i>
Moss	<i>Drepanocladus aduncus</i>
Moss	<i>Fissidens bryoides</i>
Moss	<i>Fissidens taxifolius</i>
Moss	<i>Plagiommium (sp. indet)</i>
Moss	<i>Pohlia (sp. indet)</i>
Moss	<i>Rhytiadelphus squarrosus</i>
Moss	<i>Artemisia vulgaris</i>
Mugwort	<i>Carduus nutans</i>
Musk thistle	<i>Vicia sativa subsp. nigra</i>
Narrow-leaved vetch	<i>Umbilicus rupestris</i>
Navelwort / Wall pennwort	<i>Bidens cernua</i>
Nodding bur-marigold	<i>Elodea nuttallii</i>
Nuttall's pondweed	<i>Linum bienne</i>
Pale flax	<i>Myriophyllum aquaticum</i>
Parrot's feather	<i>Oenanthe lachenalii</i>
Parsley water-dropwort	
Perennial rye-grass / Common	
rye-grass	<i>Lolium perenne</i>
Perennial sow-thistle / corn	
sow-thistle	<i>Sonchus arvensis</i>
Perforate St. John's-wort /	
Common St. John's wort	<i>Hypericum perforatum</i>
Pineapple weed	<i>Matricaria discoidea</i>
Pink water speedwell	<i>Veronica catenata</i>
Prickly sow-thistle	<i>Sonchus asper</i>

Procumbent pearlwort	<i>Sagina procumbens</i>
Purple-loosestrife	<i>Lythrum salicaria</i>
Ragged robin	<i>Lycmis flos-cuculi</i>
Red bartisia	<i>Odonites vernus</i>
Red campion	<i>Silene dioica</i>
Red clover	<i>Trifolium pratense</i>
Red fescue	<i>Festuca rubra agg.</i>
Red valerian	<i>Centanthus ruber</i>
Redshank Redleg/Persicaria	<i>Persicaria maculosa</i>
Reed grass	<i>Phalaris arundinacea</i>
Reflexed Saltmarsh-grass*	<i>Puccinellia distans</i>
Ribbed melilot	<i>Melilotus officinalis</i>
Ribwort plantain	<i>Plantago lanceolata</i>
Ringed hornwort	<i>Ceratophyllum demersum</i>
Rock samphire*	<i>Cribnum maritimum</i>
Rock sea-lavender*	<i>Linonium binervosum agg.</i>
Rough chervil	<i>Chaerophyllum temulum</i>
Saltmarsh rush	<i>Juncus gerardii</i>
Scarlet pimpernel	<i>Anagallis arvensis</i>
Sea arrowgrass*	<i>Triglochin maritimum</i>
Sea aster*	<i>Aster tripolium</i>
Sea beet*	<i>Beta vulgaris subsp. maritima</i>
Sea club rush	<i>Scirpus maritimus</i>
Sea club-rush*	<i>Bolboschoenus maritimus</i>
Sea couch*	<i>Elytrigia atherica</i>
Sea mayweed*	<i>Tripleurospermum maritimum</i>
Sea plantain	<i>Plantago maritima</i>
Sea purslane*	<i>Atriplex portulacoides</i>
Sea rush	<i>Juncus maritimus</i>
Sea wormwood*	<i>Seriphidium maritimum</i>
Sea-milkwort	<i>Glaux maritima</i>
Sedge	<i>Carex (sp. indet)</i>
Selbheal	<i>Prunella vulgaris</i>
Sharp rush	<i>Juncus acutus</i>
Sheep's sorrel	<i>Rumex acetosella</i>
Shepherd's-purse	<i>Capsella bursa-pastoris</i>
Shore horsetail	<i>Equisetum x litonale</i>
Silverweed	<i>Potentilla anserina</i>
Slender club-rush*	<i>Isolepis cernua</i>
Small pondweed	<i>Potamogeton bertholdii</i>
Smaller cat's-tail	<i>Phleum bertolonii</i>
Smooth Hawk's-beard	<i>Crepis capillaris</i>
Smooth meadow-grass	<i>Poa pratensis sens. lat.</i>
Smooth sow-thistle / Common	
sow-thistle	<i>Sonchus oleraceus</i>
Smooth tare	<i>Vicia tetrasperma</i>
Soft rush	<i>Juncus effusus</i>
Soft-brome	<i>Bromus hordeaceus</i>
Spear thistle	<i>Cirsium vulgare</i>
Spear-leaved Orache /	
Halberd-leaved Orache	<i>Atriplex prostrata</i>
Spiked water-milfoil	<i>Myriophyllum spicatum</i>
Spotted medick	<i>Medicago arabica</i>
Square-stalked St. John's-wort	<i>Hypericum tetrapetrum</i>
Strawberry clover	<i>Trifolium fragiferum</i>
Sweet vernal grass	<i>Anthoxanthum odoratum</i>
Tall fescue	<i>Festuca arundinacea</i>
Thallose liverwort	<i>Conocephalum conicum</i>
Thallose liverwort	<i>Lunularia cruciata</i>
Thallose liverwort	<i>Pelia endivifolia</i>
Thallose liverwort	<i>Riccia fluitans</i>
Thrift/ Sea pink*	<i>Armeria maritima</i>
Thyme-leaved sandwort	<i>Arenaria serpyllifolia subsp. serpyllifolia</i>
Toad rush	<i>Juncus bufonius sens. lat.</i>
Tufted forget-me-not	<i>Myosotis laxa</i>
Tufted vetch	<i>Vicia cracca</i>
Upright hedge-parsley	<i>Torilis japonica</i>
Various leaved water starwort	<i>Callitriche platycarpa</i>
Water cress	<i>Nasturtium officinale</i>
Water fern	<i>Azolla filiculoides</i>
Water figwort	<i>Scrophularia auriculata</i>
Water forget-me-not	<i>Myosotis scorpioides</i>
Water horsetail	<i>Equisetum fluviatile</i>
Water mint	<i>Mentha aquatica</i>
Water pepper	<i>Polygonum hydropiper</i>
Water plantain	<i>Alisma plantago-aquatica</i>
White clover	<i>Trifolium repens</i>
Wild angelica	<i>Angelica sylvestris</i>
Wild carrot	<i>Daucus carota subsp. carota</i>
Wild carrot	<i>Daucus carota</i>
Wild celery	<i>Apium graveolens</i>
Wild privet	<i>Ligustrum vulgare</i>
Wood sage	<i>Teucrium scorodonia</i>
Woolly thistle	<i>Cirsium eriophorum</i>
Yarrow	<i>Achillea millefolium</i>
Yellow flag	<i>Iris pseudacorus</i>
Yellow-wort	<i>Blackstonia perfoliata</i>
Yorkshire-fog	<i>Holcus lanatus</i>

# Braunton Marsh Species List

## Birds

List based on:

- Initial list supplied courtesy of  
- Mr T. Davis (Devon Birdwatching and Preservation Society)
- Personal communications from Mr R. Jutum

Barn Owl	<i>Tyto alba</i>	Greylag Geese	<i>Anser anser</i>	Robin	<i>Erithacus rubecula</i>
Bar-tailed Godwit	<i>Limosa limosa</i>	Hen Harrier	<i>Circus cyaneus</i>	Rook	<i>Corvus frugilegus</i>
Bearded Tit	<i>Panurus biarmicus</i>	Herring Gull	<i>Larus argentatus</i>	Ruff	<i>Philomachus pugnax</i>
Bitten	<i>Botaurus stellaris</i>	Hobby	<i>Falco subbuteo</i>	Sand Martin	<i>Riparia riparia</i>
Blackbird	<i>Turdus merula</i>	House Martin	<i>Delichon urbica</i>	Sanderling	<i>Calidris alba</i>
Blackcap	<i>Sylvia atricapilla</i>	House Sparrow	<i>Passer domesticus</i>	Scaup	<i>Aythya marila</i>
Black-headed Gull	<i>Larus ridibundus</i>	Jack Snipe	<i>Lymnocyrtus minimus</i>	Sedge Warbler	<i>Acrocephalus schoenobaenus</i>
Blue Tit	<i>Parus caeruleus</i>	Jackdaw	<i>Corvus monedula</i>	Shelduck	<i>Tadorna tadonna</i>
Brambling	<i>Fringilla montifringilla</i>	Kestrel	<i>Falco tinnunculus</i>	Shoveler	<i>Anas clypeata</i>
Bullfinch	<i>Pyrrhula pyrrhula</i>	Kingfisher	<i>Alcedo atthis</i>	Skylark	<i>Alauda arvensis</i>
Buzzard	<i>Buteo buteo</i>	Knot	<i>Calidris canuta</i>	Snipe	<i>Gallinago gallinago</i>
Canada Goose	<i>Branta canadensis</i>	Lapwing	<i>Vanellus vanellus</i>	Song Thrush	<i>Turdus philomelos</i>
Chaffinch	<i>Phylloscopus collybita</i>	Lesser black-backed Gull	<i>Larus fuscus</i>	Sparrowhawk	<i>Accipiter nisus</i>
Chiffchaff	<i>Phylloscopus collybita</i>	Lesser Whitethroat	<i>Sylvia curruca</i>	Spoonbills	<i>Platalea leucorodia</i>
Collared Dove	<i>Streptopelia decaocto</i>	Linnet	<i>Carduelis cannabina</i>	Spotted Redshank	<i>Tringa erythropus</i>
Common Gull	<i>Larus canus</i>	Little Egret	<i>Egretta garzetta</i>	Starling	<i>Sturnus vulgaris</i>
Common Sandpiper	<i>Actitis hypoleucos</i>	Little Grebe	<i>Tachybaptus ruficollis</i>	Stock dove	<i>Columba oenas</i>
Common Turn	<i>Sterna hirundo</i>	Little Owl	<i>Athene noctua</i>	Stonechat	<i>Saxicola torquata</i>
Coot	<i>Fulica atra</i>	Little Stint	<i>Calidris minuta</i>	Swallow	<i>Hirundo rustica</i>
Cormorant	<i>Phalacrocorax carbo</i>	Long-tailed Tit	<i>Aegithalos caudatus</i>	Teal	<i>Anas creca</i>
Crow	<i>Corvus corone</i>	Magpie	<i>Pica pica</i>	Temmincks Stint	<i>Calidris temminckii</i>
Cuckoo	<i>Cuculus canorus</i>	Mallard	<i>Anas platyrhynchos</i>	Tufted Duck	<i>Aythya fuligula</i>
Curlew	<i>Numenius arquata</i>	Marsh Harrier	<i>Circus aeruginosus</i>	Turnstone	<i>Arenaria interpres</i>
Curlew Sandpiper	<i>Calidris ferruginea</i>	Meadow Pipit	<i>Anthus pratensis</i>	Turtle Dove	<i>Streptopelia turtur</i>
Dunlin	<i>Calidris alpina</i>	Merlin	<i>Falco columbarius</i>	Water Rail	<i>Rallus aquaticus</i>
Duncock	<i>Prunella modularis</i>	Moorhen	<i>Gallinula chloropus</i>	Wheatear	<i>Oenanthe oenanthe</i>
Eider	<i>Somateria mollissima</i>	Mute Swan	<i>Cygnus alor</i>	Whimbrel	<i>Numenius phaeopus</i>
Fieldfare	<i>Turdus pilaris</i>	Oystercatcher	<i>Haematopus ostralegus</i>	White-fronted Goose	<i>Anser albifrons</i>
Gadwall	<i>Anas strepera</i>	Pectoral Sandpiper	<i>Calidris melanotos</i>	Whitethroat	<i>Sylvia communis</i>
Golden Eye	<i>Pluvialis clangula</i>	Peregrine	<i>Falco peregrinus</i>	Whooper Swan	<i>Cygnus cygnus</i>
Golden Plover	<i>Pluvialis apricaria</i>	Pheasant	<i>Phasianus colchicus</i>	Wigeon	<i>Anas penelope</i>
Goldfinch	<i>Carduelis carduelis</i>	Pied Wagtail	<i>Motacilla alba</i>	Willow Warbler	<i>Phylloscopus trochilus</i>
Great Black-Backed Gull	<i>Larus marinus</i>	Pochard	<i>Aythya ferina</i>	Winchat	<i>Saxicola rubetra</i>
Great Tit	<i>Parus major</i>	Raven	<i>Corvus corax</i>	Wood Sandpiper	<i>Tringa glareola</i>
Green Sandpiper	<i>Tringa ochropus</i>	Red-breasted Merganser	<i>Mergus serrator</i>	Woodcock	<i>Scolopax rusticola</i>
Greenfinch	<i>Carduelis chloris</i>	Redshank	<i>Tringa totanus</i>	Woodpigeon	<i>Columba palumbus</i>
Greenshank	<i>Tringa nebularia</i>	Redwing	<i>Turdus iliacus</i>	Wren	<i>Troglodytes troglodytes</i>
Grey Heron	<i>Ardea cinerea</i>	Reed Bunting	<i>Emberiza schoeniclus</i>	Yellow Wagtail	<i>Motacilla flava</i>
Grey Plover	<i>Pluvialis squatarola</i>	Reed Warbler	<i>Acrocephalus scirpaceus</i>	Yellowhammer	<i>Emberiza citrinella</i>
Grey Wagtail	<i>Motacilla cinerea</i>	Ringed Plover	<i>Charadrius hiaticula</i>		

## Mammals

List based on:

- National Biodiversity Network
- Billington, G, 2002; Radio tracking study of greater horseshoe bats at Caen Valley Bats Site of Special Scientific Interest. English Nature Research Report number 495
- Personal communications; Fred Smith

Bank Vole	<i>Clethrionomys glareolus</i>
Brown Hare	<i>Lepus europaeus</i>
Brown Rat	<i>Rattus norvegicus</i>
Common Pipistrelle	<i>Pipistrellus pipistrellus</i>
Eurasian Common Shrew	<i>Sorex araneus</i>
Eurasian Pygmy Shrew	<i>Sorex minutus</i>
European Mole	<i>Talpa europaea</i>
European Otter	<i>Lutra lutra</i>
European Rabbit	<i>Oryctolagus cuniculus</i>
Field Vole	<i>Microtus agrestis</i>
Greater Horseshoe Bat	<i>Rhinolophus ferrumequinum</i>
Red Fox	<i>Vulpes vulpes</i>
Stoat	<i>Mustela erminea</i>
Water vole	<i>Arvicola terrestris</i>
Weasel	<i>Mustela nivalis</i>
West European Hedgehog	<i>Erinaceus europaeus</i>
Wood Mouse	<i>Apodemus sylvaticus</i>