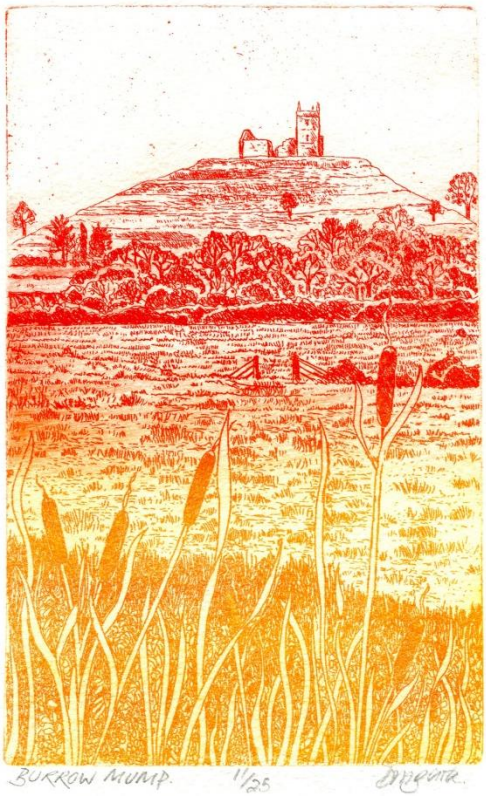
Land Drainage in Somerset

This is the season of year when flooding events hit the news all over the country and this seemed an opportune time to look at the Somerset Levels and outline of one of the major works which have taken place in the county. The Huntspill River is a wide artificial water course which acts as a drainage channel as well as a reservoir in the Brue valley.

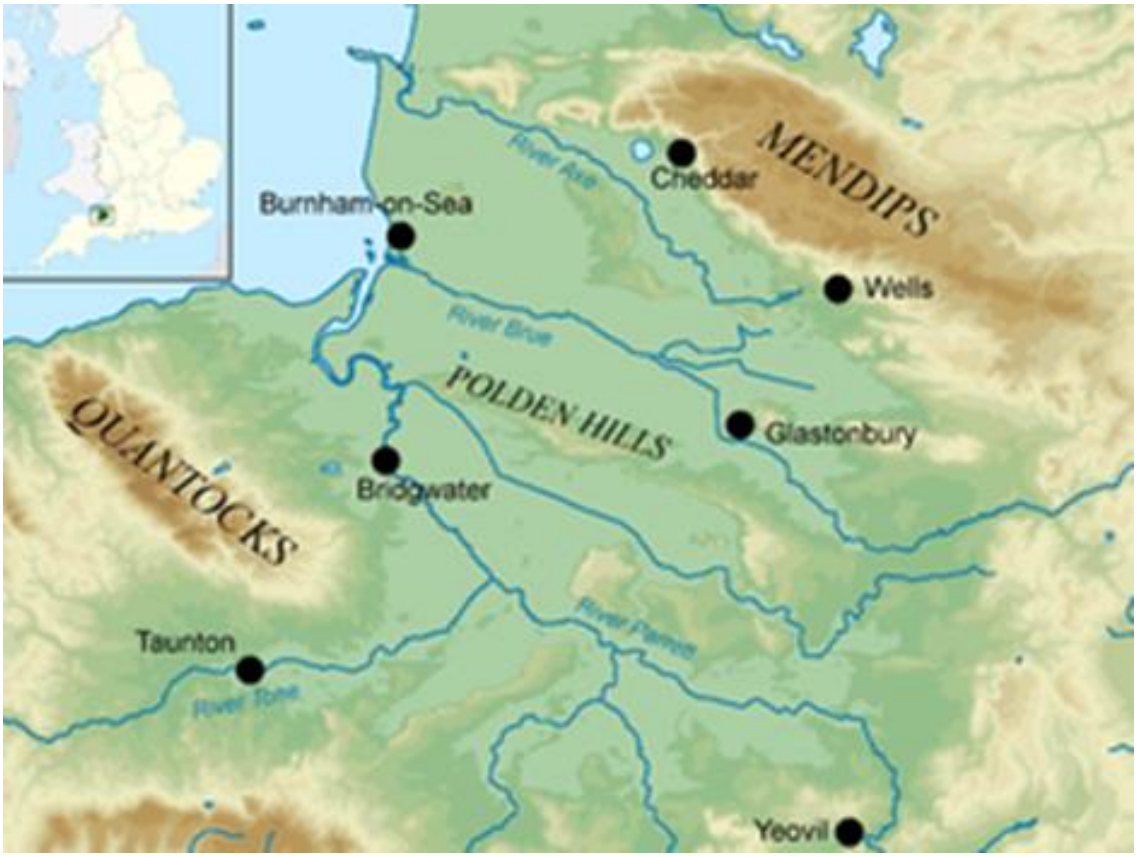
Huntspill Sluice at the river's western end separates the river from the River Parret. Courtesy SWHT

The Huntspill River, seen above, was constructed in WW2 to meet the needs of a new ordnance factory at Woolavington near Bridgwater. The factory required 4.5 million gallons of water a day. The idea for a drainage scheme in this area originated in the nineteenth century, but was not taken up due to the local river authorities being unable to agree on responsibility; hence they were unwilling to commit the funding required.

The Somerset moors and levels have been through various stages of incursion by the sea leading to salt marshes, freshwater wetlands in prehistoric periods[1]. The inland moors (usually referred to, confusingly, as the levels – which really means the clay belt adjoining the coast) were also inundated during the Roman occupation and afterwards into the early medieval period. After this, ecclesiastical estate records show the large church landowners improving drainage on their lands (and frequently feuding around disputed areas as manorial controls diminished) to create meadowlands, essential for cutting hay for winter fodder. The improvements carried out were likely to have become neglected after the dissolution of the monasteries. There were also wider concerns to maintain sea defences and the need for navigation and mills on the main watercourses, particularly on the River Tone.



Left: Burrow Mump. Image courtesy Dorothy Bark



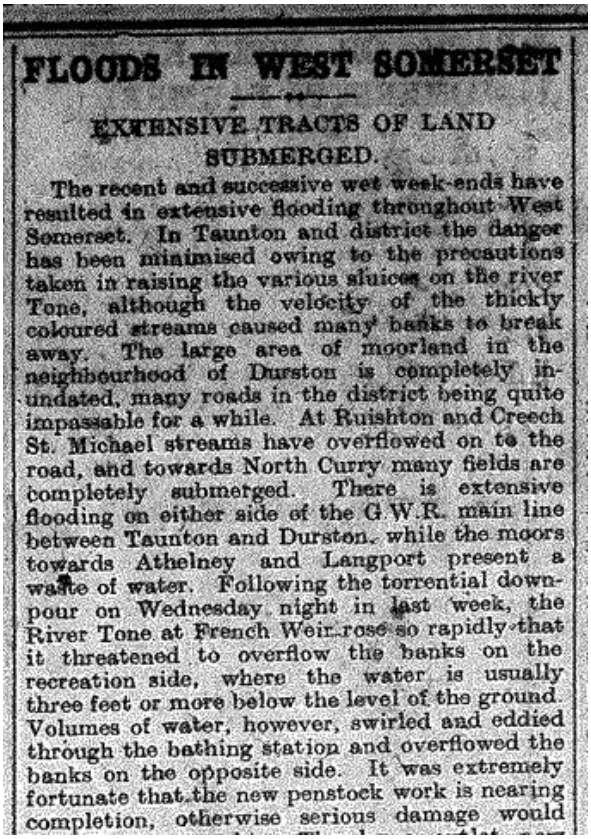
Above: The main rivers in Somerset

In the centuries that followed, flooding was a regular threat to the occupants and farmers on the Somerset Levels. Enclosures led to the creation of thousands of fields by networks of rhynes and ditches as well as new drainage systems.

One major piece of work was the construction of the King's Sedgemoor Drain with an outlet at Dunball in the late seventeenth century (see map below). Nevertheless, various Acts of Parliament failed to alleviate the problem of flooding and associated health hazards both to people (malaria) and animals (liver rot and foot rot).

The difficulties associated with fragmentation of responsibility continued well into the nineteenth century. Money was spent on improving sections of the Yeo, Isle and Parrett for instance, but without regular maintenance they quickly became ineffective; this was true for drainage systems across Levels. The introduction of the steam pump in the mid nineteenth century enabling greater control of water levels was introduced and some agricultural improvements became possible, but problems in land management persisted. Autumn and winter floods were often uncontrollable and swept across the Levels irrespective of rhynes and sluices. Increased peat cutting particularly in the Brue valley led to the depression of thousands of acres, making them more susceptible to flooding. Improvements to the River Parrett were to no avail in the winter of 1891 when the Aller Moor embankment broke and did not drain away for over five months. People in Langport had breached the embankment in an earlier flood, but this time, they were turned back by the people of Aller[2].

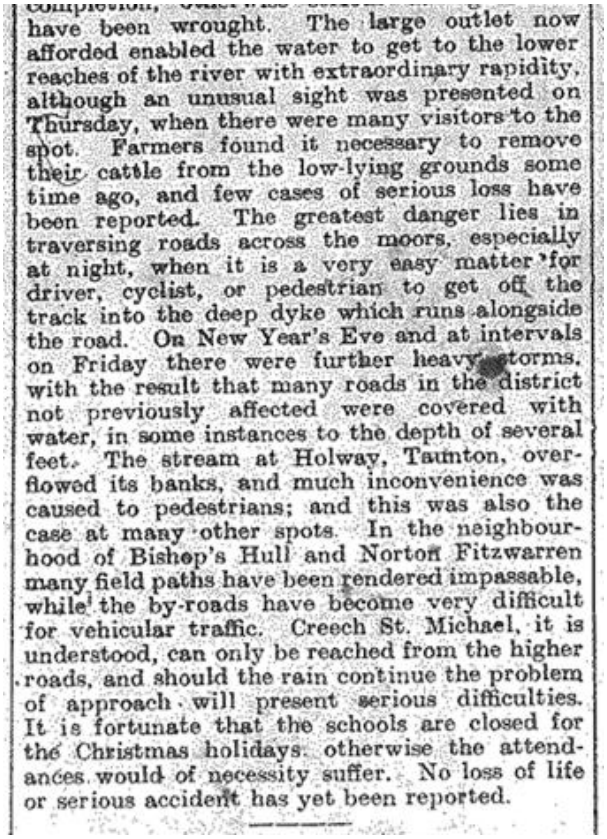
During the First World War, flooding was notable as seen below, reports from the Central Somerset Gazette in January 1915:



FLOODS IN WEST SOMERSET

EXTENSIVE TRACTS OF LAND SUBMERGED.

The recent and successive wet week-ends have resulted in extensive flooding throughout West Somerset. In Taunton and district the danger has been minimised owing to the precautions taken in raising the various sluices on the river Tone, although the velocity of the thickly coloured streams caused many banks to break away. The large area of moorland in the neighbourhood of Durston is completely inundated, many roads in the district being quite impassable for a while. At Ruishton and Creech St. Michael streams have overflowed on to the road, and towards North Curry many fields are completely submerged. There is extensive flooding on either side of the G.W.R. main line between Taunton and Durston, while the moors towards Athelney and Langport present a waste of water. Following the torrential downpour on Wednesday night in last week, the River Tone at French Weir rose so rapidly that it threatened to overflow the banks on the recreation side, where the water is usually three feet or more below the level of the ground. Volumes of water, however, swirled and eddied through the bathing station and overflowed the banks on the opposite side. It was extremely fortunate that the new penstock work is nearing completion, otherwise serious damage would



have been wrought. The large outlet now afforded enabled the water to get to the lower reaches of the river with extraordinary rapidity, although an unusual sight was presented on Thursday, when there were many visitors to the spot. Farmers found it necessary to remove their cattle from the low-lying grounds some time ago, and few cases of serious loss have been reported. The greatest danger lies in traversing roads across the moors, especially at night, when it is a very easy matter for driver, cyclist, or pedestrian to get off the track into the deep dyke which runs alongside the road. On New Year's Eve and at intervals on Friday there were further heavy storms, with the result that many roads in the district not previously affected were covered with water, in some instances to the depth of several feet. The stream at Holway, Taunton, overflowed its banks, and much inconvenience was caused to pedestrians; and this was also the case at many other spots. In the neighbourhood of Bishop's Hull and Norton Fitzwarren many field paths have been rendered impassable, while the by-roads have become very difficult for vehicular traffic. Creech St. Michael, it is understood, can only be reached from the higher roads, and should the rain continue the problem of approach will present serious difficulties. It is fortunate that the schools are closed for the Christmas holidays, otherwise the attendances would of necessity suffer. No loss of life or serious accident has yet been reported.

In 1917, heavy floods occurred : on 28th June 'a violent deluge of rain burst along the valley of the Brue and continued for the ensuing twelve hours, much more resembling a tropical storm than an ordinary English downpour. A wide spreading lake formed and gradually extended in area while increasing in depth, from the neighbourhood of Baltonsborough across the Glastonbury/Butleigh road and away across the meadows to the Street Road which, while it acted as a natural breakwater to the Meare side, for some hours soon itself became under water…..Both on Friday evening and Saturday morning Messrs C & J Clark, Clark Son & Morland and A Baily & Co Ltd found it necessary to organise a cart, wagonette and motor car service to convey their employees across the sweeping torrent, while the children of the vicinity swarmed up to indulge in the delights of paddling' (CSG June 1917)[3].

In 1930, the Land Drainage Act raised hopes of alleviating the problems of the floods, but still internal disagreements and shortage of funds meant that little was achieved. In 1939, the endless reports and recommendations were turned to action and major works were carried out. The King's Sedgemoor Drain was improved and a new outfall at Dunball installed.

The five mile Huntspill River was another major work: the river was designed to act as a reservoir to supply water to the Royal Ordnance Factory and also as a flood relief channel with sluices at each end and a pumping station for filling the cut in winter. The scheme was accepted 'the only plan being a pencil line across an Ordnance Sheet showing what seemed to be the best line for the new flood channel'[4]. The Huntspill was connected to both the South Drain and the North Drain passing through Cripps's Clyse and the South Drain Diversion.

Ordnance Survey Sheet 182 ©Crown copyright 1972

The River was completed once several problems associated with its construction and the outflow were resolved. During the digging of the river channel, the weight of the spoil bank was such that it sank and the base of the channel was thrown up. As a result, the distance between the channel and the spoil banks was extended to 30 feet. These areas then had to be levelled and reseeded. Also, as digging to a depth for gravitational discharge would cost too much, a shallower channel was cut and the pumping station at Gold Corner was enlarged. The discharge into the Parrett estuary created a great hole by the outfall which then had to be filled by all sorts of rubble. A view of the outfall into the Parrett at high and low tides can be seen at http://avalonmarshes.org/the-avalon-marshes/landscape/water-and-drainage/ .

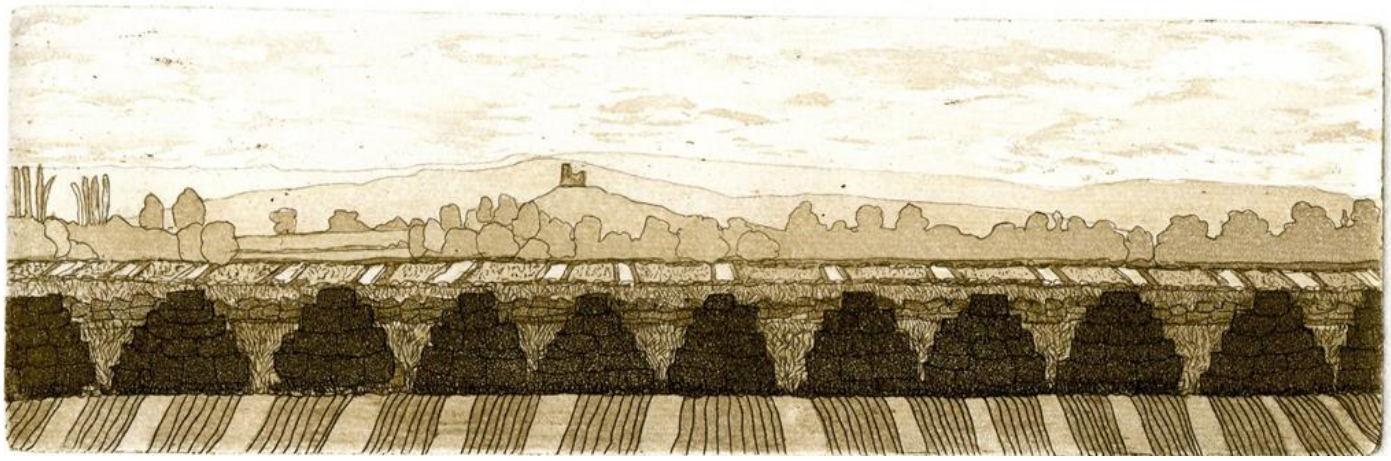
During the war, other smaller schemes were enacted using prisoners of war (as well as other teams of workers) including repairs to the sea walls. Improvements continued in the late twentieth century: the Sowy River between the River Parrett and King's Sedgemoor Drain was completed in 1972 and earlier this century, work was undertaken to upgrade sluice gates, watercourses, and culverts to enable seasonal flooding of Southlake Moor during the winter diverting water from the Sowy River[5].

As sea level has risen through the centuries, and sea defences have been improved, the land has been left behind. It is no longer rising in the same way it did when the sea penetrated inland bringing more silt and clay. Hence, over the centuries, good drainage has become increasingly important. However, drainage also causes the ground to shrink and the land becomes even lower. So today, flooding occurs in Somerset, particularly around the River Parrett as we learnt in the winter of 2013/14. Water management in Somerset now has a range of aspects to the dialogue around flood risk, from social sciences, arts and archaeology and other 'transformative narratives' [6].

After the recent floods, the Somerset Rivers Authority was launched to oversee a Floods Action Plan (no less!). One project, called Co-Adapt aims to encourage greater resilience to drought…..recent Environment Agency predictions suggest that England could run short of water within 25 years'[7]. From an archaeologist's point of view, peat wastage and the drying out of wetland scheduled monuments forms a destructive threat

and some have already been destroyed[1 ibid]. Other fears involve environment damage and wildlife loss[8]. Our relationship with the Somerset Levels must change and inevitably, this must be a concern for us all.

MC



Peat. Image courtesy Dorothy Bark

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6 *A glorious time? Some reflections on flooding in the Somerset Levels*. McEwen, L. and Jones, O. and Robertson, I. (2014). The Geographical Journal, 180 (4): 326-337.

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8 *A talk at the Glastonbury Conservation Society* . Bruce Garrard June 2016. Accessed 7th October 2019 at http://www.unique-publications.co.uk/the-brue-valley-since-ww2.html