

Spurn and Kilnsea in 2013: the weather and tidal events

| Jan Crowther

2013 was a dramatic year for Spurn and Kilnsea, and the weather and tidal events experienced that year will have long-term repercussions. The storm surge of December 5th was on a scale not experienced for decades.

Perhaps those events could be said to have begun in August 2012, when the lifeboat families moved out of their houses on the Point. Their free movement up and down the peninsula could no longer be guaranteed, owing to the increased vulnerability of the road at the northern end. This was truly the end of an era. The lifeboatmen had been supported by having their families living with them since 1819, when the first cottages were built on Spurn. The new arrangements meant a totally different shift system and living arrangements for the men who man the lifeboats. The decision to move the families, though unwelcome, turned out to be the right one, because it was not long before the road was again damaged.

In January 2013 the road was closed for one day, after high tides damaged it, but worse was to follow. On 10th and 11th February high tides washed away part of the road once more. It was repaired, but suffered further severe damage on 12th/13th March, when sections of the Armorfex road were completely washed away, and for several months the public were unable to drive down the peninsula, whilst the lifeboat crew, the Humber pilots and the staff at the VTS Tower had to drive over the sand in the northern section in four-wheel drive vehicles. This was the case for many months. At first the pilots parked their cars in the little field alongside Warren Cottage, until they began parking near the compound. A shuttle service took them down to the Point. The problems of living and working on the Point were compounded by the damage to some of the electricity poles, which had to be either relocated or replaced. Whilst they were being repaired by YEDL the generator at the Point was used to provide power. However this needed diesel to run it. Oil tankers could no longer get along the road, and therefore fuel was brought by bowser along the sand by Nick Dyer of Grange Farm. Power returned to the Point in early April.

On July 5th the road reopened. The very small and limited passing places caused difficulties at busy times, but at last people were able to drive down to the Point again. Unfortunately access was short-lived, and on October 10th high tides with unfavourable northerly winds once more destroyed sections of the

road around posts 23 to 25. This time an announcement was made by ABP, the YWT and the RNLI that the road would not be replaced in the short term, and that the situation would be reassessed in March 2014. So we appeared to be entering a new and very uncertain period so far as access to Spurn was concerned. To quote: 'The [cross] profile of the peninsula has been significantly changed and ABP has decided to wait to see what happens to this profile over the winter and

evaluate the re-laying of the road and its route in the spring. This profile change has seen a movement of the sand and silt estuarine shore edge 35 metres to the west'. It was certainly noticeable, as one looked down onto the Humber beach from the tarmac road (constructed in 1991) that the salt-marsh at that point had virtually disappeared, being covered by sand washed over from the beach. But of course the situation changed from day to day, or from tide to tide. At spring



The storm surge breaches the narrows on the peninsula © Environment Agency copyright 2013. All rights reserved



The Blue Bell car park and the borrow pit, 6.12.13 • Tim Jones

tides the river and the sea often met, and in early November a party of nine, apparently unaware of tide times and the new situation, were cut off from the mainland, and having been unable to wade across, were fortunately noticed by an ABP employee and taken to a place of safety. The YWT responded by placing warning notices to inform visitors that they needed to be aware of tide times and water movements.

What has been described as the biggest tidal surge to hit the East Coast since 1953 happened on the late afternoon and evening of Thursday, 5th December. The Met Office had been putting out tidal warnings for the East coast since Wednesday, warning people and organisations all along the coast to prepare for serious problems at the high tides on Thursday evening. Because of the warnings the lifeboat left Spurn on Wednesday evening at about 10 pm and went across to Grimsby. From 4 am on Thursday morning until 1 pm on Friday afternoon the crew had to remain on the river, because the tides, both exceptionally high and exceptionally low, meant that they could not get alongside the jetty safely. The Met Office reported that, although the strongest winds were expected to decrease in strength later in the day on Thursday, the risk of coastal flooding was set to increase, and to coincide with the spring tides.

A North Sea storm surge affects the whole North Sea basin and is related to the track of a low pressure system and its associated winds. On 4th to 5th December

2013 a very deep low tracked east to the north of Scotland. The low pressure caused the sea surface to rise and very strong north-west to northerly winds in the northern North Sea dragged the raised water surface southwards along the east coast of Britain as a storm surge. Because the North Sea becomes narrower and shallower southwards, a storm surge increases in height southwards before it turns east and then north up the west European coast.

High tide at Spurn was due at 18.54 GMT. It was predicted to be a 7.3 metre tide, one of the highest of the year. By late afternoon it was already clear that Spurn and Kilnsea were in trouble. Fortunately the gales had died down somewhat by the time the surge hit, but nevertheless the sea level was almost two metres higher than prediction. Two hours before the high tide the surge arrived in our area, impacting first on the sea-ward side of Kilnsea and the peninsula. At the lagoons the hide overlooking Beacon Pond was badly damaged, though the low dunes just north were relatively untouched. Sandy Beaches Caravan Site, however, was seriously affected. Those caravans which had been placed a few years ago near the edge of the cliff were thrown into each other and damaged beyond repair. The clubhouse was now almost on the cliff edge. Thankfully the damage was confined to the side of the site abutting the sea. A little further along, the old flood-bank, which runs parallel to the beach and south of the remains of the concrete road to the



Looking towards Warren Cottage, 6.12.13 • Garry Taylor

sea, was quickly over-topped. Water flooded into the new borrow pit, and onto the Blue Bell car park, making it impossible to distinguish one from another. The Blue Bell Café and Information Centre, Blue Bell Cottage, Warrenby Cottage and Fourways were all flooded. The sea threw boulders and rubble onto Clubley's Field, though fortunately only a few metres of the field were affected and the sea-watching hide was not damaged. However the corner of Clubley's Field, just south of the hide, where it had always been possible to step down onto the compound was washed away, and the sea ran into the compound and covered it with sand. The Heligoland trap was now uncomfortably close to the beach. From Spurn gate southwards the waters covered the road and the little sheep field. The YWT Information Centre and Barry's old bungalow were flooded. The Ringing Lab, where fortunately all important paper work had been removed to a higher level, was over a foot deep in water.

The damage at the northern end of the peninsula was quite amazing, and has changed both the landscape and access by road to the Point. The damage happened when night had fallen, but daylight revealed a scene of devastation. The tarmac road, which goes from the Warren area over an old gun emplacement and along the Humber side down to post 19 remained intact, though at its southern end it was covered with sand. From there, as far as post 31 the peninsula was unrecognisable. A large area, where the road had been,

was rendered a virtually featureless beach. The sand dunes had entirely disappeared. Several electricity poles had been knocked over, so that again there was no power going down to the Point. Moreover the water pipes were exposed and damaged, which meant that the people on the Point had lost mains water too. Dave Steenvoorden, Coxswain/Station Manager of the Humber Lifeboat, was one of the first on the scene and his photographs show the blue water pipes intertwined around the electrical wires and electricity poles, with fragments of the Armorflex road scattered all around. It was (and is) very difficult to orientate oneself, as the points of reference, like the electricity poles, the road, and the wooden posts which edged the Armorflex road along the Humber foreshore were all either gone or covered with sand. The narrow dunes on the seaward side had been washed away. The length of road which has been lost is estimated to be about a third of a mile or 500 metres. From the 5th of December the sea and the river have been meeting at most high tides. This means that the situation in this area changes from day to day.

A little further south another area of serious damage was evident. On the seaward side of Narrow Neck the defences (called the Wyke revetment) had been given much attention when the military was at Spurn. There was an obligation to protect the railway and, after it was constructed in World War II, the road. In 1942-3 a wall made of bags filled with concrete was



The morning after the surge, the Warren, 6.12.13 • Tim Jones

built here, with chalk slabs beneath. Concrete walls were also added and until fairly recent times this has been a very strong and well-defended site. For several years these defences have been under attack, but the damage has been gradual. Not so on the night of 5th December, when from just north of the look-out point all the dunes, which were protected at their feet by the crumbling revetments, were severely eroded. This has narrowed the cross-profile of the peninsula, which is fairly high here, and it seems likely that more damage will shortly follow. Because the peninsula curves round here towards the south-west, it will be hit head on by the waves from the north, which will attack the defences. It seems unlikely to last long. Just south of the look-out point, where the old concrete road used to be before it was taken up, the sea has already bitten into the cliff.

Only a little further south near Middle Camp (historically called the High Bents – bents being Marram Grass) more damage had occurred, this time on the Humber side. Until the army left in 1959 this area was protected on the river side by chalk rubble contained within wooden stakes. In January 1976 a storm surge had coincided with spring tides and caused severe damage. The flooding was described in the Observatory Report as the worst since 1953. The peninsula was damaged in several places, notably on the seaside along the Wyke revetment, and on the Humber side, near Middle Camp. The road there was undermined, as the sand was washed away, and when buildings around the Port War Signal Station near the lighthouse were demolished much of the rubble was dumped along the beach under the road to protect

it. That action has protected the road there until the present day. However, this section of the road is now unsafe, and the four-wheel drive vehicles taking lifeboat crew and ABP people working on the Point have had to follow a new track made on the top of the bank on the seaward side.

Another area to be badly affected was Chalk Bank. Here, as at Middle Camp, the attack came from the Humber as the surge rounded the Point and moved up river. The tidal surge over-topped the bank, and flooded the whole area of Wire Dump and Chalk Bank. Even the chalk ridge down the centre (the second chalk bank built in 1870, the first being along the river) was covered with water. A flock of Hebridean sheep that were grazing on the Chalk Bank area were drowned. The waters also went over onto the road, remaining there for some time. Near the southernmost hide, which was damaged beyond repair, it would appear that an old creek, which until the late 1980s was open to the river in the north-western corner of Chalk Bank, opened up just north of the hide, and provided an outlet into the Humber for the receding waters. Many birders who walk around here will know this creek, though only as a dry indentation running along the western side of the chalk ridge.

Further along the peninsula the surge did little damage, the only exception being near the site of Horseshoe Bungalow, where dunes were stripped away on the Humber side, leaving the road exposed. The Point area was unaffected, but Dave Steenvorden



Electricity pole, water pipe and sections of the road, 6.12.13 • Dave Steenvorden

considers that had the wind not dropped before the surge hit then the jetty and everything on it could have been severely damaged. Even as it was, the Humber waves were breaking on the concrete wall and spray was going right over the houses. By then the only people on the Point were those manning the VTS Tower, because the pilots and all the support staff had left in the afternoon.

North of Spurn gate the surge in the Humber did yet more damage. The surge flooded the Triangle. Spurn Road was covered with water along most of its length between the Blue Bell and the gate. The road from the Blue Bell to the Crown and Anchor was not so badly affected, though the fields to the north of the road were flooded by water coming from the seaward side. Blue Bell Pond, the small Certificated Caravan site on the south side of the road, was well under water. At the corner near the Crown and Anchor the Humber waters came over the road, but properties in this immediate area came off fairly lightly. Not so Tharlesthorpe, and other houses further north. The surge over-topped what feeble bank there was from just below Chalky Point to the Crown. The worst flooding in this area was near the Riverside Hotel, where the bank that the owners had made when the hotel was constructed was breached, and water poured down onto the car park, flooding it so badly that the Fire Brigade had to rescue one person, and the cars parked there were damaged beyond repair. The waters poured from there onto the road, and into all the

houses around this area. To demonstrate how extensive the flooding was, even as far as the rear of Westmere Farm to the north was affected. Some residents of Kilnsea were evacuated for a time. The properties flooded (16 out of the 29 properties in Kilnsea) will be counting the cost and the emotional impact of the 5th December for many months to come.

Spurn and Kilnsea must be particularly unusual (and unfortunate) because during a storm surge they are attacked from two sides — from the sea and from the river. A double-whammy! And it is quite difficult, especially because the surge struck at night, to be sure from where the waters came at certain points. However it is worth noting that this flood event could have been even more damaging. The flood banks on the Humber from Chalky Point northwards did their job effectively, though there were some areas of damage. Long Bank too was effective in protecting the fields inland. At the time of writing it remains uncertain whether there will be suitable habitat for the Little Terns at the Lagoons. The fact that the winds abated before the surge hit our area was a blessing. It could have been even worse. But 2013 will go down in the history of this area with 1906 and 1953. However, 1976, 1978, 1983, 1991, 1995/6 and were pretty memorable too, for those who were here!!

Acknowledgements

I would like to thank Barry Spence, Dave Steenvorden, Ada Pringle and Andy Gibson for providing me with information.



Looking south towards the Narrows, 29.12.13 • Rod Barrett