Our Coast Our Homes Our Jobs

Minsmere Levels Stakeholders Group (MLSG)

Newsletter No 10. December 2016

It is now two years since you received our last newsletter. The primary reason for the long interval has been that we have been waiting for the second stage of EDF Energy's public consultation on its proposed development of a new double nuclear plant Sizewell C (SZC) adjacent to the existing Sizewell A and B stations. This was at last launched last month following the go ahead given by the Government to the construction of the new station at Hinkley Point. The main purpose of issuing this edition now is to bring you our initial reaction to these latest proposals before the consultation closes on 3 February 2017.

The structure and presentation of the consultation documents presents a considerable challenge to anyone who seeks to get any idea of the cumulative impact that the complex proposed works will have on the hydrology of the Minsmere Levels (ML) and the coastline. However, we do strongly encourage you to persevere and read both the summary and full consultation document (Sizewell C Consultation Info) or physical copies can be collected from SZC office in Leiston. A freephone number is available during office hours 0800 197 6102 for any questions you may have for EDF.

The full document is available to download as a searchable PDF at Sizewell C Stage 2 Consultation Document.

MLSG's response will be posted on our website as early as possible during the week of 30th January, and inform you by e-mail once it is posted.

The Minsmere Levels since 2014.

A secondary reason for the delay in producing this newsletter is that it has been (thankfully) a relatively uneventful period both in relation to the coastal frontage and the Levels themselves. However, it is important to now give an update. Two years ago the lucky escape we had from the storm surge of December 2013, comparable to that which devastated the East Coast in 1953 which was described at the time as a 1 in 200 year event, is something which is now predicted to be a 1 in 2 to 10 years by 2100. Happily we have not been confronted by a further challenge of this kind.

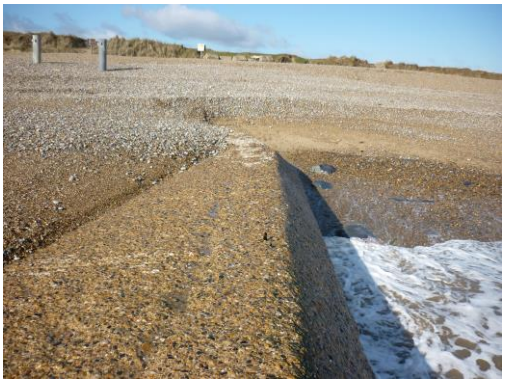
We also reported on the completion of the Environment Agency's major programme of repair and restoration of the Minsmere New Cut and its sluices, with some graphic photographs of the works in progress (please see Newsletter no. 9 available on our website). The new enlarged gates appear to have considerably improved the functioning of the sluice, although it is important to remember that rising sea levels will progressively curtail the intervals when it can discharge into the sea. The continued viability of a gravity fed sluice will thus become increasingly challenged and the time will come when there will be no alternative to looking for some form of power assisted solution if

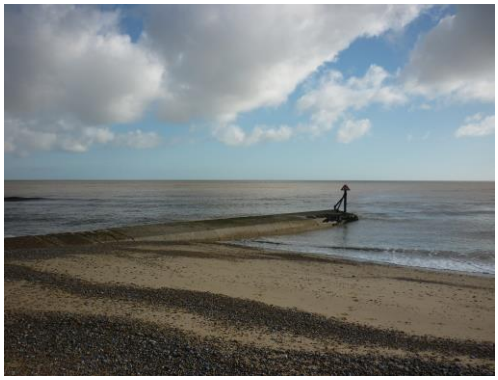
satisfactory drainage of the Levels is to be maintained. We realise how fortunate we were that the project could be completed when it was, because we think it would be unlikely today that Government would fund works on this scale.

The coastal frontage at the sluice has seen some sand and shingle movements over the past year or so, but seems relatively stable for the moment. Closer to the Dunwich cliffs below the tearooms, there doesn't seem to have been any reestablishment of the shingle bank since the 2013 event but neither does there seem to have been any significant further erosion.

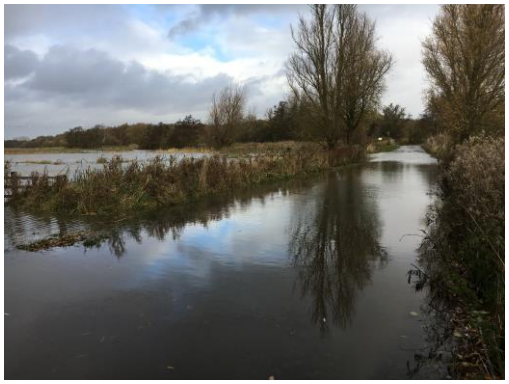
Below are a couple of photographs at the sluice that shows some of the accretion and erosion cycles that have occurred in the recent past, pre and post storm Angus.

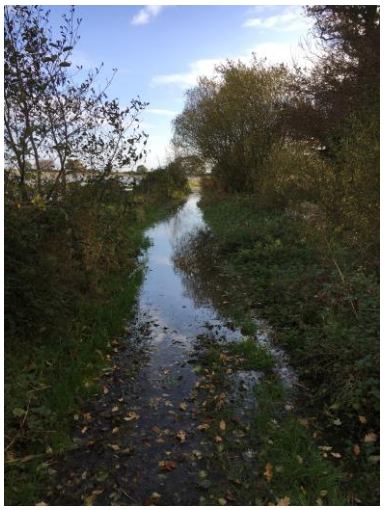
3 March 2016 – Note the build-up of sand and shingle to the south of the sluice outfall and the scour to the north where some of the rock armouring has been exposed.

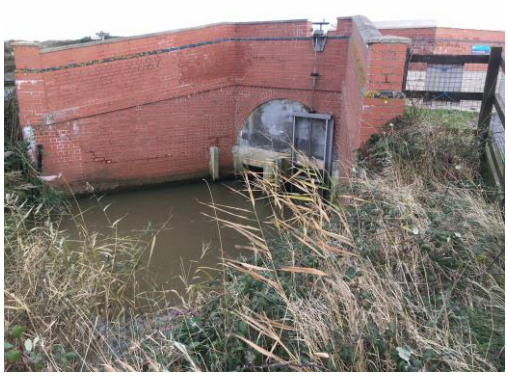


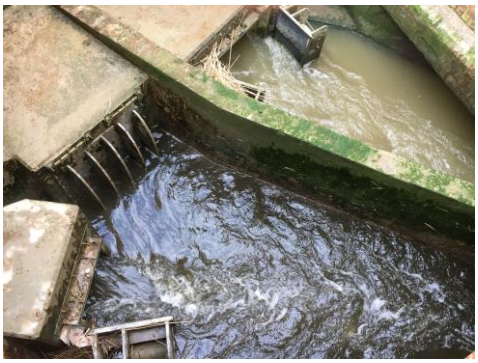


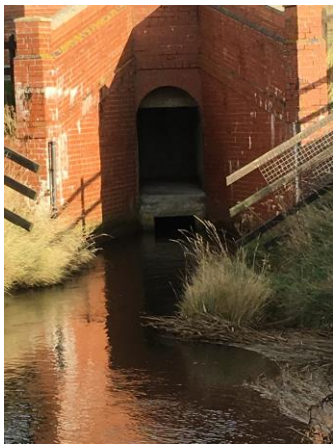
22 November 2016 – Post storm Angus. Pictures of the valley, sluice path and the sluice operating successfully without any significant build up in the Minsmere New Cut, Leiston Drain or Minsmere Scrape drain but notice, compared to March, the sand and shingle build up on the south of the sluice outfall has reduced significantly (see red line) and the rock armour to the north has been covered again, although not shown on these pictures.

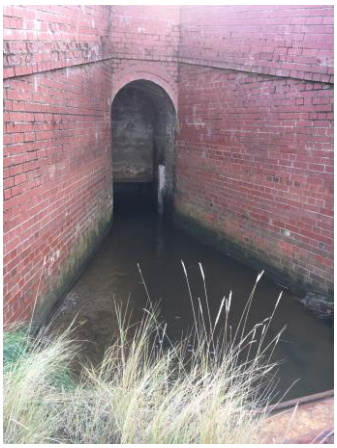


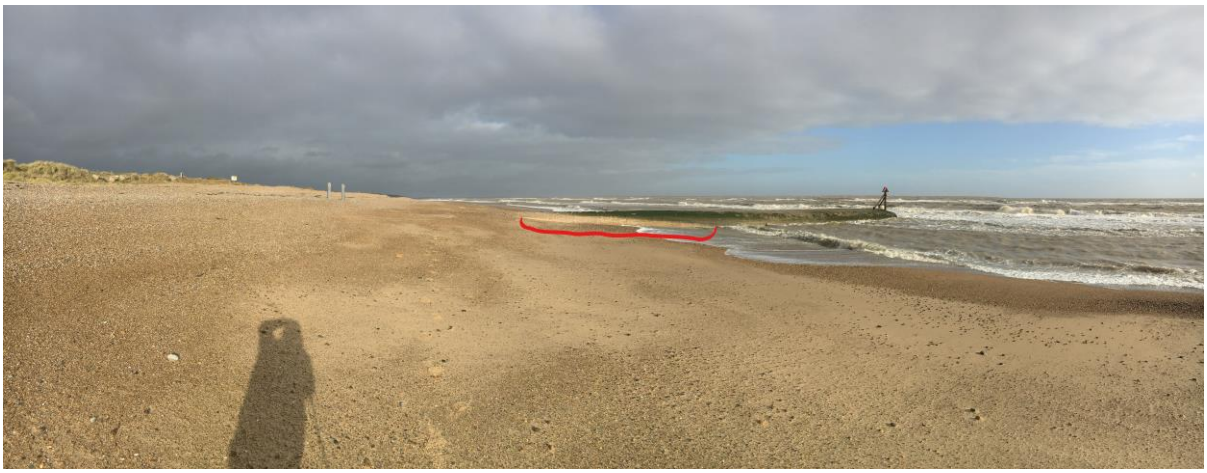












Proposed Development of Sizewell C Nuclear Power Station

As we have already said, the much delayed, second stage of EDF Energy's consultation was launched in the last week of November.

Considering the four years that have elapsed since the stage one outline of EDF's proposals were revealed in November 2012, the new documents are as significant for what they do not say as what they do.

In May 2014 the Secretary of State responded to the company's environmental scoping report setting out the areas on which much more detailed supporting evidence was required. These were, in the main, ones already raised by MLSG at stage one relating to the impact both during the construction phase and long term on:

- the coast and shoreline to the north and south of the development
- the ground water systems within the Levels

Given the sensitivity of the coastline both inland and seaward, we have been disappointed at the paucity of detail and lack of evidential analysis of the environmental impact.

There are general statements such as that 'this would be subject to appropriate monitoring and contingency arrangements' or that 'there is a potential for an effect on surface water flows which will need to be mitigated through detailed design'.

As we have said repeatedly since responding to the stage one consultation, we believe that the impact for the Minsmere coastal frontage, the inland drains, ground water systems and the functioning of the sluice are of concern, particularly during the construction phase and, perhaps to a lesser extent, during the operational phase of SZC.

The coast and the shoreline

The new consultation documents claim minimal to no impact on the Minsmere coastal frontage, thus maintaining EDF Energy's position of insisting that any changes in this very dynamic coastline will be down to natural processes rather than the development. MLSG believe that a great deal more evidence and analysis need to be provided to support EDF's assertion of minimal impact as a result of:

- The considerable extension seaward of the 55 hectare platform (incl. sea defences) of the new station beyond the main frontage of Sizewell A and B. This will be armoured with rock and topped by a bund and, as sea level rises and the coast retreats past the seaward sand dune, will create a much more substantial hard point than exists at present. MSLG believes this could put much greater pressure on the area south of the sluice and north of the SZC site, thus significantly advancing the embayment process which will ultimately lead to the SSSI south of the Minsmere New Cut themselves becoming estuarine earlier. The permanent beach landing facility and its armouring may exacerbate the situation even further and little is said about the impact of dredging that may be required to keep the BLF operational.
- The 800 long metre jetty, of which a narrow and a wide version are illustrated, will be in place for the majority of the twelve or so years of the development phase. The likelihood of erosion resulting from the slowing of sediment movement is acknowledged, but no information is given as to what 'the appropriate contingency arrangement' might be. Similarly little is said about the impact of dredging that may be required to keep the jetty

operational. No reference is made to the effect the jetty may have on navigation, recreational sailing or the Aldeburgh fishing boats.

It is essential that the cumulative impact of SZC on ML and Sizewell coastline, with the evidence underpinning these judgements, is set out well in advance of the Stage 3 consultation.

We would like to see a properly researched baseline map for the offshore seabed that shows the variations that have been observed over at least the past 5-10 years and based on the work that EDF and CEFAS have been conducting.

Then we need to see predicted models of the same area given the various the potential changes as a result of the construction of the proposed permanent and temporary structures associated with Sizewell C. On the basis of these models and the potential disturbance relative to the baseline, EDF should also be explicit about their mitigation should the actual changes deviate significantly from the baseline.

Without this level of work being done and published, it is meaningless to ask for public and statutory organisation opinions on the relative merits of two jetties and beach landing facility.

These questions are all the more meaningless considering the options are heavily dependent upon the rail strategy, questions regarding which are also asked independently.

Ground water and land drainage

The entire area of the construction site is located within an Area of Outstanding Natural Beauty (AONB) and it is surrounded by Sites of Special Scientific Interest, 5.5 hectares of which will be lost forever to the development.

In addition to the 55 hectare SZC station platform, 48 hectares are required for contractor laying down and common facilities area (e.g. concrete batching plants, green route rail head).

Some of this will be permeable, semi-permeable and some hard standing.

Immediately to the west of this, outside the AONB, would be a 24 hectare accommodation campus for 2400 workers and 19 hectares site access & entrance hub.

To the north up to 59 hectares have been designated for spoil management and “borrow pits”. Borrow pits are deep excavations into the red crag secondary aquifer to supply material that will be used in the construction and replaced by peat, clay and other materials unsuitable for use within the development site. The expected use will reduce this to ~35 hectares once the specific fields for the borrow pits have been selected.

There is potential for the refill materials to introduce pollutants to the aquifer in the years after the pits are filled and closed.

The options for a causeway/culvert or alternative designs of bridges plus the fact that the north western corner of the SZC platform will further narrow the neck of the SSSI and its corridor to ML is likely to have a significant impact on SSSI groundwater drainage systems.

EDF Energy also indicate it is their intention to pump treated foul water and any excess 'run off', collected in water management zones, from the main construction site into the sea through an outlet ~300 metres from the shoreline.

There are two competing effects here of potential blockage of the drainage corridor of Sizewell Marshes SSSI plus a reduction in natural drainage from the land taken up by the construction site and pumping out of some of this natural rainfall replenishment of the water table and marshes.

All this combined will constitute a dramatic challenge to the hydrology of the Sizewell Levels and Marshes.

Considering the activities and structures inland;

- borrow pits
- groundwater runoff and water management zones
- SSSI take to the west of the SZC platform
- movement of the Sizewell drain
- effect of the SSSI crossing north east of the SZC platform
- foul/waste water management from campus and other construction activities

It is essential that the cumulative impact of SZC on the ML and Sizewell Marshes SSSI, with the evidence underpinning these judgements, is set out, well in advance of the Stage 3 consultation.

We would like to see a properly researched baseline water level map for both the Sizewell marshes and the ML south of the Minsmere New Cut. This needs to show the annual variations throughout the year and have comprehensive flow rates through the corridor where the Sizewell Marshes drains into the ML to the north of the proposed site for the SSSI crossing bridges/causeway.

Then we need to see predicted models of the same area given the various the potential changes as a result of the proposed development site stretching west to east from the entrance at the B1122 to the SSSI crossing and north to south from the borrow pits to the green line rail corridor bordering the Sizewell marshes.

As well as the increases in groundwater runoff due to the construction and laydown areas, the borrow pits will require constant pumping as they will be dug directly into the red crag secondary aquifer.

It should be noted that significant increases in water discharges from the construction site to Sizewell marshes and subsequently onto the ML or as the result of pumping the borrow pit workings could raise water levels, damage habitats and compromise the integrity of the Leiston drain through the Minsmere sluice.

Alternatively, if water draining onto the ML is reduced as a result of "excess" runoff being pumped directly to the sea via the proposed treated sewage system, sensitive habitats could be compromised as water levels fall.

On the basis of these models and the potential disturbance relative to the baseline, EDF should also be explicit about their capability to mitigate should the actual changes deviate significantly from the baseline.

EDF are already required to maintain the flows out of the Aldhurst Farm project, why is a similar commitment not evident here?

SZC will remain on the site for a century or more, and it is vital the above analyses are projected over the construction, operational and decommissioning time frames taking account of the rise in sea level and the consequences of climate change.

It is essential that the data regarding all these investigations should be modelled in systems that are agreed with organisations such as the Environment Agency, Marine Management Organisation and Internal Drainage Board and the results made public at the earliest opportunity and well in advance of the stage 3 consultation.

If this is not done, small community organisations such as ours will be confronted with a mass of technical detail and we will not have sufficient time to properly scrutinise the proposal (10 or 12 weeks maximum).

Joint Parish Council and TEAGS Meeting 10:00 am, 7th January, St. Peter's Church, Theberton

MLSG have been collaborating with TEAGS and the Parish Council in our response to this Stage 2 Consultation. We encourage you to join us at this meeting. Further details can be found on the TEAGS website

Minsmere History – and David Robb

July 2015 saw the publication of '**The draining of the Minsmere Levels – The saga of a project and a community**', the fruit of seven years research by David Robb and John Rea Price at Ipswich Record Office.

The chance survival of a cache of correspondence and minute books made it possible to relive conflicts and financial crises that almost led to the project being abandoned. Now reprinted for the second time, copies can be bought for the bargain price of £5 from the Eels Foot at Eastbridge, the Lion at Theberton, the White Horse at Westleton or the Farm Shop at Middleton. Alternatively, contact Jon or Paul – address below.

This is a fitting point at which to pay tribute to David Robb who died in a tragic home accident earlier this year, a week before his 70th birthday. David was a founder member of MLSG in 1998, and its driving force until his death. His death was a grievous loss for his family and MLSG. We have been very fortunate that Paul Collins has joined our planning group, and taken on many of the tasks that David so diligently undertook.

Happy Christmas – and may we rise to all the challenges in 2017. We hope that you have found this newsletter of interest and please feel free to contact us.

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