

Open Floor Hearing Sea Link 5 November 2025: Written version with additions including Annex on fragile coastline

Alde and Ore Association: [REDACTED] - Chairman of the Alde & Ore Association.

The Association was formed in 1991. It has some 2000 members. It works to protect and preserve the Alde and Ore estuary and its rivers for the benefit of the public.

I will add some points to our original written statement's concerns about inappropriate visibility from 4-6 miles away in an Area of Outstanding Natural Beauty where one of its key features are wide open horizons; light pollution which is injurious to people and wild life; further damage to a dynamic and fragile coastline; inadequate road capacity; impact on the economy of the whole area; and the cumulative impact of several National InfraStructure Projects (NSIPs).

1. On **inappropriate visibility** from the Alde and Ore area, while there is evidence in the form of maps of Zone of Theoretical Visibility, if the inspectors have not been able to visit the Alde and Ore estuary we would be happy to show them the places from which the convertor stations above Saxmundham would be seen from.

2. The concern about **damaging the coastline** arises in relation to landfall issues. The Heritage coastline is very fragile and with natural forces alone is extremely dynamic, shifting with every storm. If anything interrupts the north south sediment drift that affects the shingle defence in front of Aldeburgh town and the shingle bank to the south which makes and protects the east flank of the Alde and Ore estuary: if that east flank is further thinned out it, that could hasten the sea breaking through and change the nature of the estuary.

In the last two months natural changes to the shingle shoreline in front of Aldeburgh town have again shown how mobile and fragile this coast is, increasingly so because, with climate change, storms and wave erosion are increasing in ferocity, the sea level is rising and the coast is receding faster. In early October the sea storms shaped the normally sloping shingle shoreline into steep banks some 2-3 metres or more higher above the sand level at low tide along Aldeburgh front, showing just how changeable the shoreline is

More dramatically, in the last two weeks of October a long section of the edge of the 10-metre high Thorpeness cliffs, just north of the proposed landfall area, has fallen into the sea-- a second house had to be demolished before it toppled into the sea --a potential life of some 30 years virtually disappeared in a few months. See photo at end.

Two hundred yards to the north, in 2017 a 20-foot width of cliff fell unexpectedly into the sea after some storms and killed someone. These dramatically collapsing Thorpeness cliffs are an extension southward of the very same cliffs that EA1 N and EA2 have been given permission to come in under. The drilling there, until it comes to the surface on land, is planned to be at 10 m below sea level but above it lies not a hard rocky solid cliff but a quaternary sand dune grassed on the top: that drilling is very likely to hasten the instability. (for more details on the cliff, please see the Annex attached)

Just north of the EA1N and EA2 landfall is the Sizewell C project – its landing platforms are now about to be built out over the shore, and again may affect sediment movements. On the edge of the shore line a massive platform is to be built to provide a base for the twin reactors, involving removing marshy ground and infilling with more solid soil raising the area over 14 metres above sea level. The dynamic nature of the coast was recognised at the DCO inquiry with the applicants accepting that halfway through the life of the new plant it could become a peninsular as the coast recedes.

It seems the shape of the Sizewell banks to the north have been changed in the recent storms which will also affect sea currents and wave action.

This shore line is not a hard rocky coast, but simply made up of slightly compacted layers of sand, gravel and some clay, both below and above sea level. It is highly vulnerable to disturbance. It is already clear that, with the impact of climate change, the cliff weakened by constant battering of ever more forceful storms will be receding faster than was predicted five years ago.

All the proposed manmade actions will add to the instability further south including affecting the long shore drift. Now, it is proposed to bring the Sea Link cables into landfall only just over a mile further south of the fragile Thorpeness cliffs at North Warren. Landfall will be through the extremely friable coralline crag using Horizontal Direct Drilling (the Crag looks like and breaks like a ginger biscuit and is not a solid rock.) With the faster erosion of the cliffs, sea level rise and the potential of the sea bed disturbance being caused by HDD, this fragile coastline could become even more unstable to the detriment of flood defences further south.

3. Inadequate road capacity- a great deal has already said about how the area is already failing to cope with SZC, EA1 N and 2 and indeed there have been signs for E3 diversion. (Please see submissions from SEAS and the many comments made at the Open Floor Hearing) If an NSIP development has not been proven to be absolutely

essential and unavoidable with no alternatives, the area should not be put under even further strain.

4. On **the impact on the whole area**. In its submission the Association referred to studies on the economic value of the Alde and Ore area. I would like to pass to the Inspectors, via the help desk, a copy of our newsletter of Spring 2025 as transmission of the “word cloud ” on why people come to the area was not possible in the internet format. 735 people filled in the survey form, giving 5 words each as to why they come to the area, to achieve that word cloud. It shows clearly that the area is a destination of choice because of the tranquillity, peace, beauty, countryside, quiet, unspoilt, wild life and much more. The imposition of several NSIPs conflicts completely with the attractions that enable the area to earn 70% of its economy from tourism.

And that result does not even cover the impact of traffic disruption.

5. The cumulative impact of several NSIPs on this tiny corner of the country will have many substantial adverse consequences. Already Sizewell C (SZC) alone is having a very damaging effect. For more than 10 years a volunteer community partnership has been working to upgrade the 41 km of the river flood defence walls of the Alde and Ore estuary. The clay walls were built some 600-800 years ago and need renewing every 70 years or so, but these have been hardly touched since the estuary-wide restoration after the 1953 floods.

Finally, in January 2023 approval and grant of £11million was given the go-ahead to repair the walls in the upper estuary from Snape Maltings down to Aldeburgh. A year and a half later the costs had soared to £27 million. Some of the increase related to construction amendments but a significant part is down to extraordinary increases in essential local resources, driven by the start of SZC work: the salaries of digger drivers are now not £25,000 a year but £60,000 plus free training. The cost of bought in clay is now not £14 a tonne but £25.

The estuary community is now seeking to see how much of an amended project can be kept, the outlook is not good and so all or some of the £11m grant may be lost. Another cheaper solution will have to be found for the rest of the estuary. For the greater part of the estuary, we are back to the drawing board as to how to get the walls repaired, and that will be against the new background of the NSIP driven increase in costs and availability of resources, whether clay or labour and machinery.

More NSIPs over the next ten years would mean that the meagre resources in the area will continue to be well overpriced. Should this mean that each winter the Alde

and Ore area faces the prospect of winter storm surges with inadequately repaired walls and meanwhile sea level is rising too? The 1953 floods were terrible - the dramatic impact on the area, including boats rowing in Aldeburgh High Street, could be repeated, or as more recently, in the 2013 major storm surge, 26 houses and a pub were flooded at Snape and took months to be made habitable: this could be repeated any time if the walls are not repaired. The 2017 storm only missed Snape Maltings by half a metre, Orford and Slaughden quays are underwater several times a winter when average size surges occur. The longer it takes to repair the old walls, the greater the likelihood of highly damaging breaches.

Are communities to be left open to flooding until 10 or 15 years down the line when the several NSIPs are completed finally freeing up the local resources, people and materials to repair the walls. The negative impact of all the road and construction work could at least in part be compensated by making our coastal jewels more sustainable into the long term and therefore improving tourist appeal and investment.

If the area is simply overloaded with huge NSIPs projects, all planned within a 5–10-mile radius, locally people, the economy and very special environment will face more winter flooding and declining earnings from the key local economic activity.

Do come and visit the estuary to see the view inland



Above. October 2025- coastal land slips, the house to the right had to be demolished at very short notice because of the unexpected speed of collapse

Annex to Open Floor Hearing 5 November 2025

Alde and Ore Association-

The concerns relate to the integrity of the Suffolk Heritage Coast which has evolved over millennia. Any damage to the cliffs could impact on the longshore coastal evolution of the entire coast. Briefly, the coast has seen in the north, Dunwich losing its port in the Middle Ages and falling into the sea with further south Aldeburgh town losing 2-3 streets 3 centuries ago but the Alde and Ore Estuary being formed by the growth of the uniquely long Orfordness shingle spit, mostly between 1200 and 1600, but thinning now. Such longshore processes could be dramatically changed by manmade changes further north.

EA1N and EA2 have chosen around a kilometre of coast as the site for the landfall of the offshore cables. The reasoning behind this is that it is essential to meet the need to avoid constructions in the sea related to the Sizewell power stations and a concern for not disturbing the seabed rock of coralline crag which is a strong influence of coastal transport and sediment flows. The selected landfall site was simply what was left on that stretch of coast where the cables might come in, with no reference to its suitability. The whole cliff on this coastal stretch is really nothing more than a slightly hardened sand dune and is at one of the coast's most visibly obviously fragile points.

It seems that a lot of on-the-ground research work has been done but mostly in relation to the immediate area of land and sea surrounding the Sizewell developments - both at sea, but even there it is still far from complete focussing on the limited environs of the Great Sizewell Bay, and the land abutting the coast on which Sizewell A and B sits and Sizewell C could be built. There is relatively little desk study material on the nature of the land forming the coast between Sizewell and Thorpeness.

What does this cliff land bordering the sea consist of? It is an area of very confused and broken sedimentary layers, reflecting the coming and going of the sea in geological times on the edges of a marine basin, complicated further by some uplift. On the top is a modest layer of glacial till and sand and gravel. This overlies what is called the Norwich Crag Formation. Crag is a 19th century term which misleadingly suggests it might be a solid rock formation, like limestone, but it is the name given to a deposit of fossil shells and any shelly sand or gravel - here it is in fact a mix of yellow and brown sand bands with occasional clay bands. It has no strength against a crashing surge sea as is evident from its collapse in 2017 after a series of storms which sadly killed someone, with some 20 feet of the cliff from inland to its edge slumping down in an instant with no warning. Below the Norwich Crag in places is some Red Crag, often little more than a mix of coarser gravel and sand. In places the Norwich Crag then lies, in unconformity, on the Coralline Crag- this is a harder material, partially indurated (BGS)-but is not that robust, as is evident on the ground as it is easy to pick up small slabs on the beach. It does indeed affect sea flows but is also quite brittle.

Comments on Horizontal Direct Drilling. Landfall is proposed through this slightly hardened sand dune area of mainly sand and gravel layers, using horizontal direct drilling. The plan for the HDD cores to come up at 85m inland is understandable: the coast is moving inland by an average of 0.1m a year, but the actual amount varies considerably and in recent years visual observation suggest the rate has been much faster, indeed seems to have speeded up in the last five years.. Whether the distance inland is far enough is not the issue. The issue remains can this soft ground structure withstand the tunnelling of a series of ducts through it, the volume of ground to be extracted from the tunnels, the impact of tunnelling and the time taken.

Documents differed as to the number of cables and ducts expected but the original proposals provided for 4 ducts for each of the two EA windfarms for the export and fibre optic cables plus two Distributed Temperature Sensing cables. There is no information on how much material underground will have to be extracted but each cable will need a duct 50 % larger than its size. The cables will involve a substantial removal of the friable sediments.

General comment on Horizontal Direct Drilling. In theory HDD methods are expected to be adapted for the local area. Provision for monitoring and managing vibration is to be made, as it will occur in the drilling/reaming process or pulling cables through the ducts. But the drilling operations will take a long time, sometimes in continuous 24-hour working periods and spread over months. Given the non-rock like composition of the land whether at the Sea Link landfall of coralline crag, the marshy ground at North Warren or the grille/sand below it, even modest or small vibration over a long period is likely weaken the natural loosely packed ground.

If the area is de-compacted and loosened in this way, the advance inland of the sea may not be an average of 0.1 m pa, but could be accelerated as landslips will occur very easily when the shore is attacked and shuddered by waves on top of the not infrequent winter surges.

The concern is that scale of the operations on this fragile area is such that there could be a dramatic change in the coast and alongshore flows.

The impression has been given that HDD is the simple solution to a land fall which can be managed. But given the nature of the land forming the cliffs, interference with its very composition could lead to a huge step change in the rate of erosion, with dramatic changes to the coast shape and coastal flows. There is no way, once lost, that cliff line can be restored.

Cumulative impact:

The respected company, Mott MacDonald, said in a report of December 2014 on coastal management strategy that Thorpeness is located in a zone of relatively high wave energy. An improved understanding between the features is required. Given the incomplete understanding of the coastal processes great care must be exercised for coastal management strategy. Understanding of local coastal processes is not yet well enough established to inform coastal defence designs.

References

Mott MacDonald: Shoreline Management Plan: Thorpeness Coastal Erosion Appraisal, Final Report
December 2014

Descriptions of Norwich and Red Crag: Suffolk Coast and Heaths, Suffolk geological society- GeoSuffolk,
various documents related to Sizewell C planning applications.

British Geological Survey documents for the area.


Chairman of the Alde and Association

24 November 2025