**WRITTEN REPRESENTATION OF**

**MINSMERE LEVELS STAKEHOLDERS GROUP (MLSG)**

# Minsmere Levels

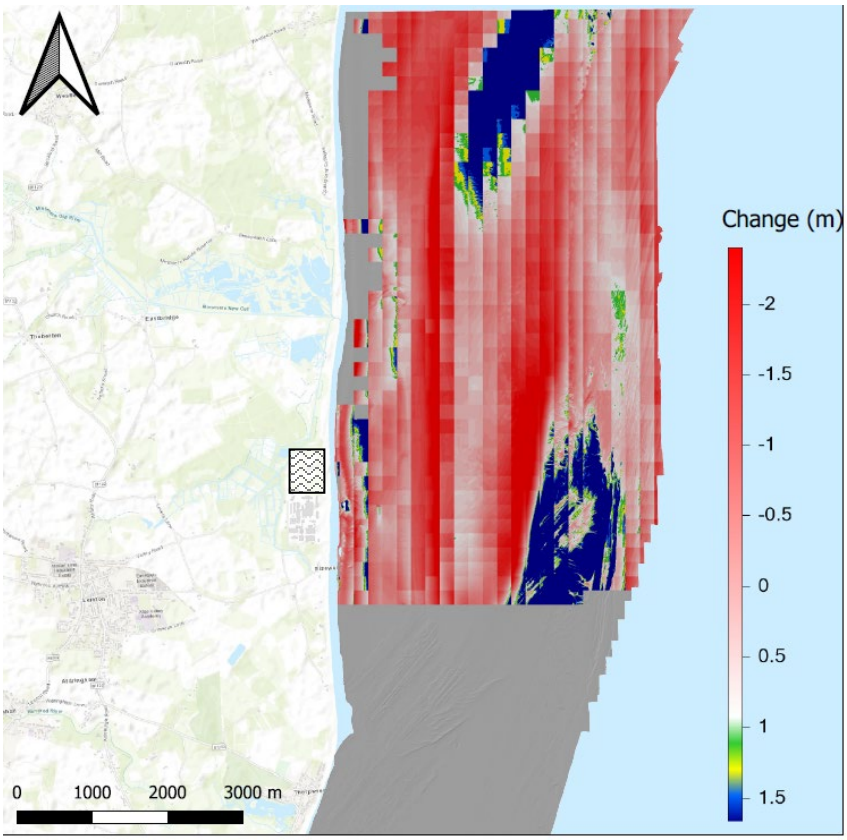
The Minsmere Levels are marshes starting south east of Reckford Bridge and finishing at the Minsmere Sluice. They drain the area of land either side of the Minsmere River starting at Sibton Lake. Sizewell Marsh drains through the southern Minsmere Levels to Minsmere Sluice and has a significant hydrological influence on the southern levels as a result.

# Representation

MLSG is concerned that the Sizewell C (SZC) Development Consent Order Application (DCO) submitted by SZC Co remains significantly incomplete and fails to provide answers to questions raise consistently during four rounds of consultation and despite the opportunity to address some of these shortcomings in the non-statutory consultation on potential changes to the Development Consent Order, failed to do so across many of the issues raised in the proposed changes and which have been requested throughout previous consultation stages. In short,

- The Hard Coastal Defence Feature (HCDF) toe at 0m OD will be subject to undermining by wave action if exposed. Reliance on the proposed Soft Coastal Defence Feature (SCDF) is unproven and unrealistic given the episodic nature of coastal erosion on the Suffolk coast.
    - No design for the HCDF has been made available for examination, yet SZC Co have unevidenced confidence about its likely exposure and have submitted a Coastal Processes Monitoring and Mitigation Plan without a design being available to assess it against.
    - The permanent Beach Landing Facility (BLF) will be the most north easterly point of the construction site and with its undefined HCDF protection will be a significant groyne when exposed. No design, beyond the piles, roadbed and docking facilities, for its integration with the HCDF have been presented and, perhaps more than any other part of the HCDF, this structure will be the most impactful on coastal processes.
    - We consider SZC Co's assessment of the impact of both the HCDF/SCDF and BLF to still be inadequate on a number of points and defer to Mr Nick Scarr's submission AS-028 and updates that may be submitted at Deadline 2. We believe the reliance on the existing CPMMP is inappropriate given no plans of the permanent BLF, HCDF and SCDF in relation to the existing coastal frontage has been made available.
    - The current parameter plans and HCDF Figures are too vague to be of use in any assessments. Figures 2.2.20, 2.2.22 and 2.2.25 in Environmental Statement Addendum, Vol 2, Chapter 2 (AS-190) alongside the Main Site Parameter Plan (AS-118) are insufficient to define the construction and location of the combined defence and their relationship to the existing sacrificial dune and beach.
- The DCO for Sizewell C has only considered tsunami events triggered from the Azores. Whilst this is a recognized potential threat, compared to the threat posed to Hinkley Point C, the Sizewell coast is protected by the southern coast of the UK and the constriction of the English Channel at Dover. No consideration has been given to a tsunami event triggered by an undersea slide from the Norwegian Coast, similar to the Storrega event 8,200 years ago which was estimated to produce a 30m tsunami in the North Sea. Whilst this event was significant, there have been other less significant undersea slides in this location since that event. Further details of this can be found in a paper submitted by Mr. Bill Parker and we support the evidence within that submission.

- The role of the Sizewell-Dunwich Bank and its role in reducing wave heights and wave energy reaching the shoreline at Sizewell C.
    - Referring to the TR311 Synthesis Report submitted by Stop Sizewell C from Professors Cooper and Jackson on Sizewell Coastal Geomorphology and Hydrodynamics. Their conclusions of its shortcomings are:
        - *Inadequate future timescale*. Consideration of shoreline change (and mitigation activities) in SZC Co's reports do not extend beyond 2080 whereas the site requires protection until 100 years post-decommissioning (ca. 2200).
        - *Insufficient spatial scale.* The entire 70 km-long Suffolk coast and adjacent seabed comprises a single large-scale coastal system within which geomorphic changes are intimately interlinked.
        - *Inadequate consideration of the dynamics of nearshore banks*.
        - *No consideration of complex system behaviour* - i.e. beyond straightforward process-response geomorphology.
        - *Use of false assumptions underlying the Expert Geomorphological Analysis*.
    - Differential plots of Bathymetric Surveys (https://seabed.admiralty.co.uk/) – 1984 HI196 Orford Ness to Southwold and 2017 HI1495 Orford Ness to Southwold shows that overall, both the Sizewell and Dunwich banks are reducing in height (+ve values) and that all surrounding areas are increasing in height (-ve values). The difference modeling was carried out in EIVA NaviModel and plotting in QGIS. Sizewell C site is shown as a square box just above the existing Sizewell A and B sites on the coast.




    - Winter and storm wave patterns are from the North East which places Sizewell C at greater risk from wave energy crossing the saddle between the Dunwich and Sizewell Banks and impacting the SZC foreshore.
- The potential impact upon the SSSI crossing and northern flank of the platform from coastal breach north of the proposed permanent Beach Landing Facility.
- The platform is well below the expected 30 hectares per nuclear reactor envisaged in EN-6 and has required unacceptable compromises on long term site safety and consequential landscape and visual impacts.

- SZC Co's assessment of the impact of the construction on the relationship between ground and surface water is significantly underplayed.
    - The platform requires redirection of existing drainage in Sizewell Marsh, permanent loss of SSSI marsh, wet woodland, and fen meadow with un-evidenced expectations for simplistic water level controls as mitigation.
    - Proposed mitigation strategies for reduced water within Sizewell Marsh risk damaging the site with inappropriate nutrient rich water from Leiston Drain.
    - Dewatering of the platform and changes to surface water runoff conditions will alter the natural hydrological relationship of the complex Sizewell Marsh and Minsmere Levels systems and is likely to impact water quality and have a negative impact on Minsmere Sluice
    - The overall ecology of both Sizewell Marsh and Minsmere Levels are reliant on the annual cycle of ground and surface water changes, any disturbance will have direct impacts on bird, insect, reptile and mammal species.
- Hydrological impacts of the proposed Causeway and Culvert crossing are not realistically assessed.
    - The crossing structure is piled within a sheet pile barrier (PDA-005) which will significantly alter groundwater mobility and restrict natural movement towards the coast, South Minsmere Levels and Minsmere Sluice.
- Plans to satisfy the potable water requirements of the development are not evidenced within the Development Consent Order application and it is not clear if the resources discussed with Northumbrian Water and detailed in the Statement of Common Ground (SoCG) with MLSG will be available within the required timescales.
- Plans to satisfy the non-potable water requirements are sketchy and some are impractical. Reliance on winter rainfall making a significant contribution for the dry spring, summer and autumn conditions at the site is unrealistic.
- Spoil heaps have great potential for introducing fugitive dust problems and given the highly mobile soils of the area may well be unstable and prone to significant rainwater erosion and run-off. We believe SZC Co's assessment of these issues is inadequate and doesn't take the risk seriously enough.
- Borrow pits containing attenuation ponds and later as a destination for disposal of unusable materials from excavations, including acidic peat, pose both a short term and a long-term threat for pollution of groundwater. The idea that because the excavations will stay 2m above the water table will protect the water table from pollution given the high water conductivity of the sandy soils and gravels is this area is unrealistic. The Wood Environment 2020 report submitted by EDF APP-296 finds no literature regarding alkalinity impacts on sensitive receptors as present in Minsmere-Walberswick SSSI and Ramsar site. A conclusion that this indicates no significant concern, is erroneous and rather indicates that this is an unstudied set of ground conditions.
- Significant environmental impact assessments dismissed with undefined monitoring and mitigation.
- Reports relied upon not available for assessment with some further details give in the SoCG.

MLSG endorse the Written Representations of,

- Theberton and Eastbridge Action Group on Sizewell (Stop Sizewell C)
    - In particular, but not limited to the TR311 Synthesis Report June 1st 2021 by Professor Derek Jackson and Professor Andrew Cooper
- Alde and Ore Society
- Suffolk Coast Action for Resilience
- Mr. Nick Scarr
- Mr. Bill Parker
- Royal Society for the Protection of Birds
- Suffolk Wildlife Trust
- Suffolk Coastal Friends of the Earth

Under Rule 14(3) of The Infrastructure Planning (Examination Procedure) Rules 2010, MLSG may wish to call expert witnesses in support of this representation or subsequent written representations