

## Q2 Main Site Development: Environment

**A major weakness of the Stage 2 consultation document** is that where what little environmental information is provided on the possible impact on ground water and hydrology ( e.g. on the borrow pits and contractors' compounds) it is confined to that particular activity.

**Nowhere in the document is the cumulative impact of all the processes brought together so a proper evaluation can be made and informed responses to the consultation questionnaire be given.**

Given the sensitivity of the coastline both inland and seaward, we have been unimpressed at the paucity of detail regarding the possible, or probable, environmental impact provided at this second stage consultation. **Such information as is provided is dispersed almost randomly throughout the main document and most difficult to access in the absence of any index and without any significant attempt at internal cross-reference.**

Ash Wood is important for bats as is the whole area. The development will have a massive impact on the local bat population. *This will need new compensation habitat to reduce this impact. What is planned in this regard?*

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'.

*We believe that the impact for the Minsmere coastal frontage, the inland drains, ground water systems and the functioning of the Minsmere sluice are of major concern, particularly during the construction phase but also during the many years that the station will be in place, both whilst operational and also subsequently in decommissioning.*

### **The coast and the shoreline**

The second stage consultation documents claim minimal to no impact on the Minsmere coastal frontage, thus maintaining a position of insisting that any changes in this very dynamic coastline will be down to natural processes rather than the development.

Whilst this may be true for the existing 4-5m sacrificial dune above the shingle beach, once this is breached, *the new site protection features could considerably accelerate the natural embayment processes to the north of the site. No evaluation seems to be made regarding this eventuality.*

*The species rich grassland along the length of the Sizewell C frontage is going to be destroyed. What are the plans to mitigate and compensate for this impact?*

### **Ground water, potable water and development site drainage**

6 hectares of SSSI will be lost forever to the 55 hectare SZC station platform development and its access road. *The Aldhurst Site Habitat Creation site, whilst welcome, cannot in anyway be considered as adequate mitigation for the loss of 6 hectares of SSSI at Sizewell.*

*Appropriate mitigation needs to be provided for this loss and for additional damage that will be caused to the SSSI during works to establish the SZC platform, creating a bridge across the SSSI and moving the Sizewell Drain.*

The construction development area will consist of 91 hectares of permeable, semi-permeable and hard standing. Water Management Zones (WMZ) will be used to divert and hold rainwater 'run-off' from the site. *There is great potential for water in the WMZs to be polluted from development site workings.*

*It is essential that water reaching the surrounding SSSI is treated in an appropriate Waste Water Treatment Plant (WWTP) and free from any site pollution.*

The Stage 2 document indicates it is intended to pump both treated foul water from the accommodation site and other on-site facilities along with any 'excess run off', collected in WMZs, from the main construction site into the sea through the 'fish return' (FR) outlet ~300 metres from the shoreline. *The WWTP and FR facilities will not be available for a considerable amount of time after development starts. No indication is given about how water from the WMZs will be managed and treated prior to the WWTP and FR being available.*

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

We believe it is essential that a properly researched baseline water level map for both the Sizewell marshes and the Minsmere Levels south of the Minsmere New Cut is produced. These need to show annual variations throughout the year based on at least 5 years of historic data and have comprehensive flow rates through the corridor where the Sizewell Marshes drains into the Minsmere Levels to the north of the proposed site for the SSSI crossing bridges/causeway.

We also believe it is essential that a properly researched baseline water level map for the area 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 which clearly present the range of scenarios that the development site could be faced with until such time as the development site is fully restored

*Actual data must continue to be collected during the development, into the operational and later to the decommissioning stages of SZC which can then be compared to the predictions to ascertain whether SZC has impacted the expected behaviour of the landscape and trigger mitigation by EDF.*

*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*

There is no mention in the consultation document regarding supply and usage of potable water or other abstracted water for use during the construction or onwards into operation of the site.

It has been estimated that the accommodation site alone will require 250 m<sup>3</sup> per day and no estimate or indication of the additional requirement for construction activities such as concrete batching plant are given. In production the two power stations will need about 1,600 m<sup>3</sup> per day, although why this cannot be reduced in what should be closed loop cooling circuits is a surprise and a disappointment given the technologies available today for recycling water. The only open loop is that of sea water intake and output.

Suffolk Coastal District Council have recently approved a significant set of new housing developments in Leiston which will put added pressure on the potable water supply in the area. To have a significant short and long term addition to requirements for potable water from the local supply has to be demonstrated as both available and not detrimental to the overall water supply situation as clearly stated in EN1 5.15.3.

This is a significant omission in the Stage 2 Document provided by EDF regarding water requirements through both the development and operational phases. This is a clear and regrettable omission from both Stage 1 and Stage 2 consultations and needs to be addressed considering this area is known as one of the driest areas in the UK.

A full breakdown of water requirements for all stages of construction and operation over time must be provided at Stage 3 consultation, along with proportions that will come from direct water abstraction licenses, together with locations, and from mains water supplied by Essex and Suffolk Water.

#### Q3 NEW ACCESS ROAD

The Stage 2 document offers several options for a causeway/culvert or two designs of bridge to access the SZC platform from the development site and as the permanent entrance to Sizewell C site.

Due to the expansion of the Sizewell C platform, the Leiston Beck and Sizewell Drain will be redirected to a single channel to access the Leiston Drain that connects this area to the Minsmere Sluice.

Any causeway crossing the 'neck' of the Sizewell Marshes and Minsmere SSSI sites will compress the underlying material and effectively block the natural hydrological flow between these two areas.

*The two bridge designs will offer least disturbance to the natural hydrology and Option 3 offers the least disturbance overall and is preferred.*

*Bridges would also allow the early restoration of the access from Kenton Hills to Sizewell and Minsmere beach frontage whereas causeways would close this access for the estimated 12 year term of the development.*

Comments made in the Main Site Environment Section about baseline water level maps, modelling and onward monitoring are also applicable here as the access road choice and implementation could radically affect the hydrology of the Sizewell Marsh to Minsmere Levels drainage.

#### Q4 MANAGING CONSTRUCTION MATERIALS

35 hectares are proposed for borrow pits and spoil management within the AONB and SPA

As the borrow pits penetrate the secondary aquifer, they will need to be pumped out regularly during their open lifetime. *One water management zone is sited to the north of the borrow pits but without any potential for intervention to manage polluted water. Natural drainage and water flow is to the north and thus poses a significant pollution risk to the Minsmere Levels SSSI.*

There is significant potential for the borrow pit back-fill materials to introduce pollutants to the secondary aquifer and consequently the local waterways that form part of RSPB Minsmere and Minsmere Levels SSSI in the decades after the pits are filled and closed.

The borrow pits are very close to the marsh harrier fields being developed and, as a consequence, noise and light pollution from the development are likely to disturb the feeding and breeding patterns for this protected species and other nesting species in the Minsmere Reserve.

**We find the borrow pits to be wholly unacceptable as a part of this development. Construction materials should be sourced from existing sand and gravel resources and brought to site by rail or sea. Spoil should be removed from the site by rail or sea to a location that requires such materials, like RSPB Wallasea Island.**

The locations of fields 1 to 3 are too close to Eastbridge and Minsmere and the prospect of a crossing of the Eastbridge road from field 1 unconscionable. *The hedging along the Eastbridge Road is an excellent example of old hedging with larger oak trees and any damage to such an environment must be avoided.*

Likewise Field 2 moves the site northern boundary closer to Eastbridge, effectively completes the surrounding of The Round House and must be rejected.

*If we are forced to have any of these options, then fields 3 and 4 represent the least worst of the three options, but really no borrow pits should be allowed to be created at the development site.*

*If any fields are used, plans need to be developed to monitor groundwater seepage from the pits once they are back-filled to ensure no pollution is caused by leachate from the buried materials*

*Plans for mitigation, should any pollution be detected, need to be specified in any future consultation.*

15 Hectares of spoil heaps and extracted sand and gravel resources are proposed. These heaps are to be between 20 and 35 metres high at their maximum and the heaps will be on site for up to 8 years in total.

The heaps will be visible for most of the development time from Eastbridge, Minsmere and Dunwich Heath and most of the PRow that criss-cross the area to the north.

With prevailing winds from the south west, the natural travel for dust and sand pollution will be directly across Minsmere Levels SSSI and on into Minsmere Bird Reserve and onwards to National Trust Dunwich Heath property, threatening wildlife on the Minsmere Levels and Reserve.

*There are no proposals as to how sand and dust will be contained and prevented from leaving the site or how potential leachate pollution from spoil heap run-off will be managed on site.*

Q9 TRANSPORT SEA

**A guiding principle of the Sizewell C development and operation should be not to accelerate any natural coastal process.**

On the Suffolk coast, it is well understood that hard points significantly advance the embayment process to the north of such structures. Local examples include Minsmere Sluice outfall and Walberswick/Southwold harbour entrance on the Blyth estuary

Proposals for the Beach Landing Facility (BLF), both for use during development and as a permanent facility, coupled with site armouring extending right to the toe of the

sacrificial dune and the possibility of an 800 metre jetty present hard points much closer to the sea than either those at Sizewell A or B.

At the north of the site, the sacrificial dune is in far worse condition than that to the South. **As the BLF extends right out to the sacrificial dune and has piles driven into the shore beyond the dune, the potential for this structure to cause accelerated embayment to the north and allow Minsmere SSSI to become saline much earlier is a real concern.**

*There is no mention of this possibility or of any efforts to assess the possibility of this occurring. Mitigation of such an outcome would be very difficult or impossible and the potential damage to the habitats on Minsmere Levels SSSI catastrophic.*

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.

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 Walberswick, Dunwich, Aldeburgh and Sizewell fishing boats.

No information is provided as to how the jetty and piles are to be removed at the end of their use. The 1,000 piles cannot be left to become a permanent legacy in the marine environment influencing sediment movement for decades to come.

*EDF need to specify how the piles will be fully removed or if they are to be cut below the water line provide clear evidence and mitigation for the long term effects of any such strategy*

**This concern alone raises doubts as to the wisdom and viability of the whole development at this fragile point on the coast.**