



Interested Party ID: 20025904

**THE SIZEWELL C PROJECT**

**NNB Generation Co (SZC) Ltd**

**EN010012**

**Deadline 7: WRITTEN SUBMISSION OF ORAL CASE (ISH10) and  
EXPERT COMMENTS on ISH10**

**Authors**

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## Mitigation Strategy

A key agenda item of ISH10 was *Fen Meadow Proposals* (Agenda Item 4a). Although absent, Natural England noted the importance of this agenda item in their written response with their concerns regarding “the likelihood of success”. While we all accept that fen meadow proposals cannot be guaranteed to be successful, legislation is clear that a developer must deliver a strong scheme that has a high likelihood of success. As the inspector summarised during ISH10, the applicant must make “reasonable endeavours”. Past examples show us that schemes for ecological compensation are successful when they are well-planned, delivered well in advance of the construction phase of a development and when underpinned by scientific rigour.

Whilst we appreciate that significant funds have been allocated to provide subsequent additional mitigation should the current plans fail, our assessment is that there is a significantly lower likelihood of success than the applicant suggests.

We strongly propose that the current status of the technical assessments merit a successful scoping study, and not a successful feasibility study. A positive outcome of a feasibility study would be possible only after the year’s data collection at an absolute minimum, also importantly followed by data process, interpretation and reporting.

## Hydrology

The feasibility plan to create fen meadow has insufficient baseline monitoring data for water levels (also true for water chemistry). Critically, important sampling of water levels and nutrients (nitrates and phosphates) was only started in Jan 2021 (Benhall & Halesworth) and April 2021 (Pakenham).

Given that the year of hydrological monitoring at Pakenham finishes in April 2022, completion of this process is likely to be possible only in early summer 2022. At this point a better-informed assessment of the feasibility of M22 habitat creation would be able to be completed.

This assessment should have sufficient time to be fully reviewed and signed-off by the applicant’s consultants. The current submissions show significant signs of poor-quality collection and/or processing of water level data. Examples are on pages 261, 262 and 264 of PINS reference REP3-052 (full reference below), where there is very poor correlation of manual and logged data points, which has no associated explanation.

Also relevant to the monitoring is that April was “exceptionally dry” (NRFA, 2021). This underlines the need for longer datasets to understand the hydrological dynamics of the system in different conditions. Twelve months is the minimum, but ideally we would be looking for 24 months or more for a robust understanding of system dynamics across different conditions, depending on incident weather conditions.

At Pakenham, there is a need for the third-party abstraction to cease, but there is no discussion around whether this is likely.

Again at Pakenham, we are concerned that water levels might be too low here for effective habitat creation in summer months. Wheeler *et al.* (2009) suggests summer water levels down to 1.75 mbgl are possible, but this is exceptional and in drought conditions and would not be expected to be observed in a short record outside drought conditions. Note that one month of “exceptionally dry” conditions (see above) does not constitute an established drought, and it is not considered that we are currently experiencing such an event. It is also important to note that if the restoration is

dependent on groundwater discharge, monitoring, or at least consideration, of the effects of a groundwater drought (e.g., a succession of low recharge years) is important.

We would like to see more direct reference to the Wheeler *et al.* (2009) work, given that it is a national benchmark reference for this type of target habitat. Some more detail around what the requirements for M22 are simply must be included in the submission.

We would like to be sure that the hydrological manipulation and ongoing management planned for each of the potential fen meadow sites is sustainable, and not requiring active management through pumping or similar. Again, this can only be done only once the monitoring programme has been completed.

### Water Quality

As with the hydrological data collection programme, the datasets are considered to be too short to provide meaningful insights into the feasibility of effective habitat creation as mitigation for the loss of SSSI at the construction site.

A “water quality plan” was promised for D5, then D6, and has still not been delivered. This is a critical document in light of the fact that all available water chemistry data (including the applicant’s minimal data for 2021) shows that at least two of these sites (Benhall & Pakenham) have problems with nutrient enrichment in the context of creation of M22.

Nitrogen and Phosphorus concentrations are very high at Pakenham and Benhall, and as such we consider these sites to have a very low likelihood of successful M22 habitat creation. Without doubt there is a need for more data, including the development of an understanding of the seasonal dynamics of nutrients. This is currently a serious constraint on the project.

### Summary

As independent ecohydrological experts, we endeavour to provide a balanced critique of the submission. We are pleased to see that in document REP3-052 groundwater upwelling is being observed at the three mitigation sites. This is really positive, and obviously we hope that the fen meadow creation here is successful.

However, with the shortcomings outlined above, it is our opinion that the applicant is not making reasonable endeavours to provide a fen meadow scheme with a likelihood of success. Consequently, we ask that you draw to the attention of the applicant a sense of urgency for delivery and also ask that this topic be included for important further discussion in ISH11.

### References

**REP3-052:** EDF submission Document 9.34: Fen Meadow Plan Report 1: Baseline Report: Part 2 of 2 Revision 1.0, Appendix I, Water Monitoring Summary.

**National River Flow Archive (NRFA), 2021.** *Hydrological Summary for the United Kingdom, April 2021.*

Accessed via: [http://nora.nerc.ac.uk/id/eprint/530307/1/HS\\_202104%20v2.pdf](http://nora.nerc.ac.uk/id/eprint/530307/1/HS_202104%20v2.pdf).

**Wheeler, B.D, Shaw, S. and Tanner, K., 2009.** *A wetland framework for impact assessment at statutory sites in England and Wales: Chapter 19, M22.*

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