

**Response from the Alde and Ore Association (Registered Charity number 1154583)
IP REF:20026276**

**Post hearing submission ISH 15
on the proposed temporary desalination plant, Change Request 19.**

The AOA reserved comments on the desalination plant just after the hurried period of public consultation as there appeared to be no complete assessment of its potential physical impact on the coast and it was not possible to be including what impact there might be on the shoreline. That remains the case.

1. Some additional information was provided in September, as in REP7-030 and later documents. All these relate to the desalination plant lasting only for a few years and definitely no longer than the construction period. But it is emerging that the desalination plant may not be a temporary stop gap and may be needed for as long as the life of the operation of the two plants. Desalination was listed by Northumbrian Water during ISH 15 as one of the means to be investigated by which water might have to be supplied for the operation of the twin plants. The assessments simply do not cover that eventuality.

Natural England, in its evidence submitted on 25 August 2021, stated quite clearly that if the plant were to be more long lasting it advised “that further extension into the operational phase would require further detailed assessment”. Document REP7-030 Para 3.7.17 states quite clearly ‘as the desalination plant is not present during the operational phase, only pressures during the construction phase have been assessed.’ Assessments are not therefore complete: a short term desalination plant may not affect the shoreline, except possibly where relic constructions remain in place, but a long term construction lasting for decades is of a different order.

2. In relation to the documents listed to be examined at ISH 15: Rep 7-030

a) The wording in the document gives little confidence that, even for the construction phase, the assessments are not yet firmly based. For example: the word ‘assumed’ is used in several places. ‘Assumed’ is not a firm enough concept on which to base assessments of likely physical or chemical impact. e.g., para 3.2.44 ‘Once headworks are constructed, scour protection is *assumed* to be placed over them to manage the effects of seabed level changes’ or ‘A small area of concrete *is assumed* to mitigate scour immediately around the section of the intake pipe...’ This may be unfortunate wording, but it remains unclear whether the approach is based on proven action or speculation as to what might be needed?

The Applicant, at ISH 15, provided assurances that stronger clarification and detailed assessments were being prepared for Deadline 10: however, there will be no opportunity to examine and comment on Deadline 10 documents.

b) Even with the assessment in REP7-030, there is still work to be done:

- Para 3.2.44 mentions ‘managing the effects of seabed level changes’. Are these the depressions that may develop in the seabed REP 7-029 Para 3.7.35 or something more, and what would be the management necessary? Would the impact on shore dynamics be minimal?

- para 3.2.46 expects the seawater intakes works would be decommissioned once the then hoped for mains water supply arrived. But there is no assessment of the impact of exposure of relic infrastructures of the intake and outfall pipes for the temporary desalination plant given that, over

the life of SZC, the coastline will be retreating. Further, were desalination to become the long term solution for water supply, what could be the impact on the shore/shoreline/banks if the intake was needed for the entire operational life of the twin reactors?

- para 3.2.51 states that localised dredging is *assumed* to be necessary in the immediate surrounding area of head work. It is accepted that a short term period of dredging may be recovered from but if the desalination plant needs to be in place for decades, what would be the effect of continual dredging on the shore and shoreline and possibly the longshore sediment transport?

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