

Title: Thermocline mixing and vertical oxygen fluxes in the stratified central North Sea

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Notes to author:

There is considerable improvement required on the article before publication. The responses to referee comments have been examined. These by way of information, explanation and illustration (figures) should be incorporated into a revised version.

All referee comments/queries must be satisfactorily responded to in the revised edition.

General .

- As pointed out the paper relies on a single measured event so be cautious about applying general terms such as seasonality: more data are needed for that. Much is inferred hypothesis: clarify to the reader upfront that this is a single “process-orientated” study.
- In many cases explanations provided in your responses are useful. Such explanation should be incorporated into the actual revised text (sections 1.2.3, 4) and likewise the additional figures should be added. Remember the article should be easy to follow by readers not-familiar and non-expert with this North Sea region. The reviewer has pointed this out, and in most cases your responses are satisfactory but make sure that the information is available to the reader who should be able to follow the flow of the paper without having to search for details elsewhere.