Reply to final comments from the editor

Many thanks for the additional comments which I have now incorporated in the final version of the paper.

- abbreviate minutes by min
  Done

- use a dot rather than a comma as decimal separator
  Now corrected in the line where this was not already done

- use x rather than * as multiplier sign
  *As far as we can see this was already the case. * is solely used on the front page to indicate the email of the corresponding author*

- 320, 934, 941, axis of Fig. 4 and elsewhere: you have not measured light intensity but irradiance
  We changed light intensity to irradiance in text and figure.

- throughout the paper, spp should not be in italics
  Corrected

- do not use plural for genus names (Ulva rather than Ulvas)
  we corrected "Ulvas ability" to "the ability of Ulva"

- try to avoid jargon such as OA, use ocean acidification instead. In contrast to the request of one of the reviewers, feel also free to sue diffusive boundary layer!
  OK, we have now corrected this.

- Is it the light attenuation coefficient that you are reporting? Unit should be m-1, right?
  Yes!! The unit is now added.

- 143: open water pH
  Done

- 169: 1-3 m
  Done

- 184: vertical profiles were performed
  Done

- both NBS and NIST are used for buffers. Please use the same term throughout the paper
  NBS buffers changed to NIST buffers throughout

- 216: K1 and K2, K in italics and 1 and 2 as subscripts
  Done

- 242 and elsewhere: SeaFET
  Done
- 251:no need to indicate the serial number of this instrument
  Serial no now deleted

- 255: in situ
  Done

- 276: spp not in italics
  Corrected

- 319: min
  Done

- 406: "Tidal changes in water masses"?
  Done

- 415 forward: isn't it the other way around: lower omega at night than during the day?
  Yes, thank you!!

- 429: perhaps indicate a typical range?
  Yes – this is already reported in the first sentence of that paragraph.

- I would move line 449 to line 324 because not only data from section 3.4 are archived but all data, right?
  Right! We made the change.

- 537: pH changes of
  We kept "pH ranges of" as we here report the range of pH within 1m3 at any point in time

- 546: large supersaturation levels
  Done

- 565 and elsewhere: pH range
  Done

- 592: acidic means less than 7.0, which you have not measured. Hence, use low pH instead.
  Done

- 928: Kobbefjord on 19 April
  Done

- Fig. 2: the isolines of pH will be very difficult to read in print. You should consider increasing the font size (likewise of the axes). This also applies

to other figures, which would benefit from an increase in size in order to be of great quality when scaled down.

After agreement with the editor (e-mail from Jean-Pierre Gattuso of 30 July 2015) we have maintained the size of the isolines and fonts of the figures. In order to make sure that all figures are in best possible quality, we have inserted each of them again in eps version before making the pdf version of the revised manuscript.

I further contacted our graphical department who highly recommends that I also send you each figure in eps version so that you can insert these directly in the typeset version of the manuscript. This will ensure the best possible quality of the figures. I'm ready to send/upload these – just let me know when and where.