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EDDC / Regulation 19 consultation response form / March 2015

Submission by Tony Burch, [REDACTED]

EDDC Cllr Geoff Jung and Sidmouth Town Council chairman Chris Lockyer have asked me to say they agree with this submission. Date 30 March 2025

Draft 2 sent

1. To which part of the Adapting to Climate Change chapter does your representation relate?

Select one option

Paragraph

Policy

Figure/Image

[Highlight Figure/image](#)

1(a). Please write down the paragraph, policy or figure number that your representation relates to.

Policy AR03: Coastal Change Management Areas (CCMAs) / Policy Map for Sidmouth CCMA along Cliff Road and for the cliffs immediately to the west and east of Sidmouth.

2. Do you consider that this part of the Adapting to Climate Change chapter is legally compliant?

Select one option

Yes

No

[Leave Blank](#)

2(a). If yes, and you wish to support the legal compliance of this part of the Adapting to Climate Change chapter, please use this box to set out your comments.

NA

2(b). If no, please give details of why you consider this part of the Adapting to Climate Change chapter is not legally compliant. Please be as precise as possible.

NA

2(c). Please set out the modification(s) you consider necessary to make this part of the Adapting to Climate Change chapter legally compliant, in respect of any matters you have identified above. You will need to say why each modification will make this part of the Adapting to Climate Change chapter legally compliant. It will be helpful if you are able to put forward your suggested revised wording for the relevant policy or paragraph. Please be as precise as possible.

NA

3. Do you consider that this part of the Adapting to Climate Change chapter is sound?

Select one option

Yes

No

No

3(a). If yes, and you wish to support the soundness of this part of the Adapting to Climate Change chapter, please use this box to set out your comments.

3(b). If no, please give details of why you consider this part of the Adapting to Climate Change chapter is not sound. Please be as precise as possible.

- 1. The CCMA map east of the River Sid in Sidmouth (along Cliff Road) is not justified because it is not based on solid evidence in the LPA evidence library - hence it is not sound.**

1.1 SUMMARY

Fact 1 - The Sidmouth CCMA map along Cliff Road is drawn in accordance with Figure 7 in the Outline Business Case (OBC Fig 7).

Fact 2 - OBC Fig 7 is based on an “update” of the 2017 BMP using “more recent data”

Fact 3 - Evidence of the “more recent data” and how the “update” was carried out with that data in order to produce OBC Fig 7 and hence the CCMA along Cliff Road does not exist in the LPA evidence library.

Conclusion: In the light of facts 1, 2 & 3 it follows that the CCMA along cliff Road is not justified because it is not based on solid evidence in the LPA evidence library.

1.2 DETAILS of evidence in support of Facts 1, 2 & 3

1.2.1 - Evidence in support of Fact 1 – ‘The CCMA map along Cliff Road is drawn in accordance with Figure 7 in the Outline Business Case (OBC Fig 7)’.

a) Topic Paper CCF-005 on Coastal Change / paragraphs 4.4, 4.5 and 4.6 and foot note 30 - explain:

The CCMA boundary “*east of the River Sid in Sidmouth*” (see para 4.4) (i.e., along Cliff Road) is drawn “*in accordance with the BMP OBC line*” (see para 4.6) where, according to foot-note 30, that line is “Figure 7 on Page 11 of the Outline Business Case” (OBC Fig7).

Note: The acronym ‘BMP OBC’ in the Topic Paper is not correct because the BMP (Beach Management Plan) did not have an OBC (Outline Business Case). The later Beach Management Scheme (BMS) has an OBC. For consistency with the Topic Paper and to avoid confusion, I will continue to use the acronym ‘BMP OBC’ even though it should be BMS OBC.

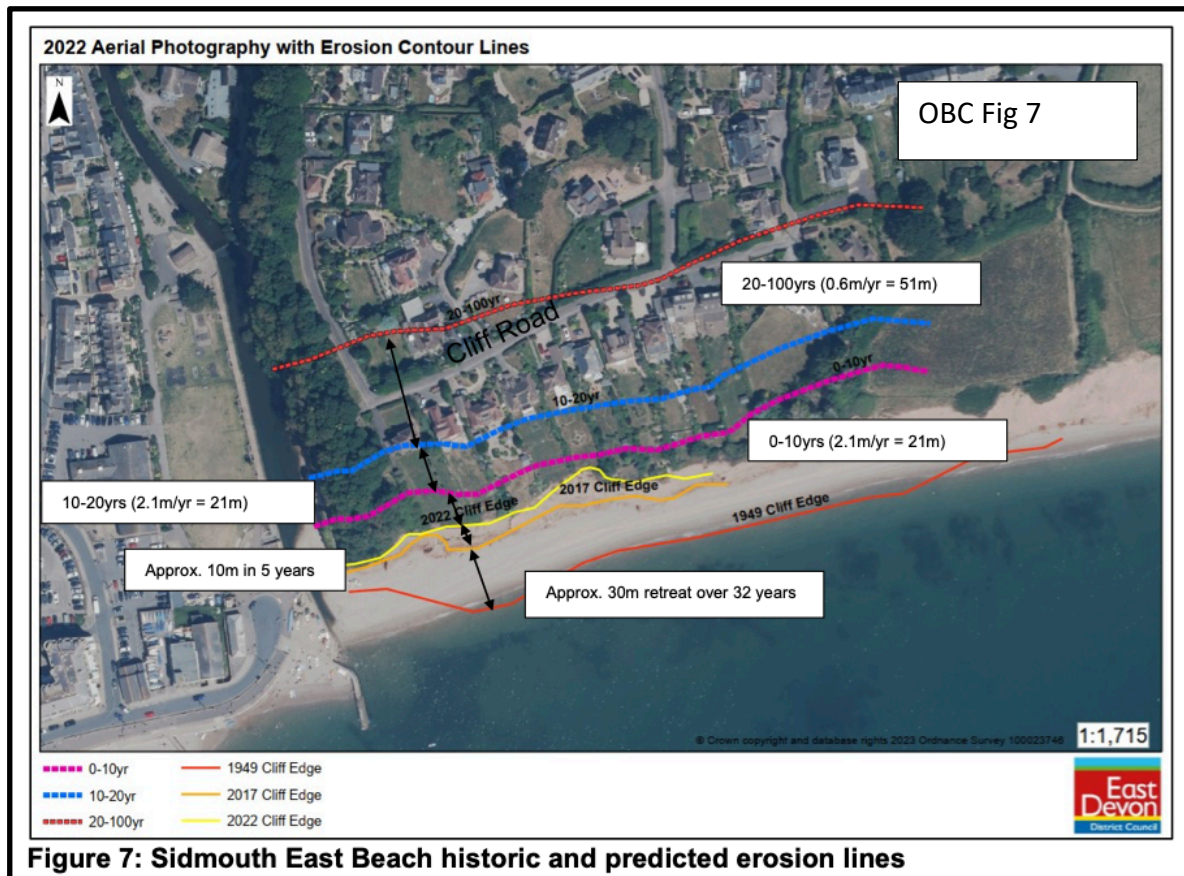


Figure 7: Sidmouth East Beach historic and predicted erosion lines

Please note:

- 1) the labels [0-10 yrs. (2.1m/yr = 21m)], [10-20 yrs. (2.1m/yr = 21m)] and [20-100 yrs. (0.6m/yr = 51m)] for future reference.
- 2) The label [Approx. 30m retreat over 32 years] appears to apply to the retreat between 1949 and 2017 cliff lines, in which case the label is not correct because it is 68 years between 1949 and 2017. The LPA were asked if this error made any difference to predicted erosion lines. They did not answer the question.

1.2.2 - Evidence in support of Fact 2 – ‘OBC Fig 7 is based on an “update” of the 2017 BMP using “more recent data”’.

a) 05 March 2025. I emailed the LPA with:

*“I have not been able to find the evidence in the OBC and its appendices upon which OBC Fig 7 is based. Please let me know where it is.
In particular I would like to see the evidence for the labelled erosion rates of 2.1m/year for 0-10 years and for 10-20 years and of 0.6m/year for 20-100 years (that are in OBC Fig 7).*

b) 12 March 2025 the LPA replied with:

*“I have been advised the erosion rates in the Sidmouth BMP OBC were based on **Appendix D of the OBC - see section 3.3.2.** Effectively the 2017 BMP numbers were used as a starting point and revised upwards to reflect more recent/frequent cliff recession that occurred after the 2017 BMP work was done”*

c) Appendix D (dated 18 Jan 2023) / Section 3.3.2 states:

*"It is outlined in the BMP that East Beach cliff will continue to retreat over the next 100 years. The BMP noted that the lowest estimate of retreat would be 20.9m and the upper estimate of retreat would be 30.9m. These rates were **updated** to use **more recent data**, as cliff erosion **appears** to have accelerated in the past decade. With the revised rate of -2.1m / year between year 0 to 20 years and 0.6m / year between year 20 and 100, the cliff is estimated to retreat by 92.5m over 100 years. The BMP also provides estimates on the residual life of the training arm and wall along the River Sid."*

Note:

- the underlining and the emboldening are mine
- the "revised rate of -2.1m / year between year 0 to 20 years and 0.6m / year between year 20 and 100" is exactly the same as on OBC Fig 7 above, except for the typo error '-2.1' which should be '2.1'

The main points in Section 3.3.2 are;

- i. The BMP (this is dated 2017) predicted the cliff would retreat 20.9/30.9m over the next 100 years.
- ii. The 2017 BMP was '**updated**' in circa Jan 2023 with '**more recent data**', which predicted the cliff would retreat 92.5 m over the next 100 years
- iii. Fig 7 in the OCB and hence the Cliff Road CCMA are based on that '**update**'.

Hence, the evidence that underpins OBC Fig 7 and therefore the CCMA along Cliff Road boils down one sentence in Section 3.3.2.

That sentence is:

*These rates were **updated** to use **more recent data**, as cliff erosion **appears** to have accelerated in the past decade.*

d) For there to be 'solid evidence' to justify the CCMA along Cliff Road, evidence of the '**update**' and the '**more recent data**' needs to be reliable and publicly available/in the LPA evidence library. So, I asked the LPA where to find it

1.2.3 - Evidence in support of Fact 3 - 'Evidence of the "more recent data" and how the "update" was carried out with that data in order to produce OBC Fig 7, does not exist in the LPA evidence library.'

a) 17 March 2025. I email the LPA asking:

*"Please let me know where to find that '**more recent data**' and how the '**update**' was carried out"*

b) 21 March 2025 the LPA replied with:

*"I am advised that **there is no further detail in the RHDHV OBC documents setting out what additional data they reviewed in their work to update the CH2M analysis.** It is assumed that there would have been more photography and survey data available post*

*the CH2M work, but **if you wish to explore this further, you would need to ask RHDHV if they can advise.***

Note: RHDHV were EDDC's consultants who produced the OBC and wrote S3.3.2 and CH2M (formally Halcrow) were EDDC's consultants who produced the BMP to which S3.3.2 refers.

Note: Because the LPA in effect advise.... *If I want to see the evidence of the 'more recent data' and a report of how it was used to 'update' the BMP work, I will need to ask the Consultants RHDHV for it....* therefore, I assume that evidence has not been published and it is not in the LPA evidence library.

Hence evidence of the 'more recent data' and how NHDHV used that data to 'update' the BMP does not exist in the LPA evidence library.

1.2.4 - Conclusion: In the light of facts 1, 2 & 3, supported by the foregoing evidence, it follows that the CCMA along cliff Road, which is based on OBC Fig 7, is not justified because it is not based on solid evidence and therefore the Sidmouth CCMA along Cliff Road is not sound.

1.3 Notwithstanding that conclusion there is evidence that, according to the LPA is not in their evidence library which, if correct, shows OBC Fig 7 and hence the CCMA along Cliff Road is based on a biased analysis of the 'more recent data'. This is explained in section 2 of this submission.

2. There is evidence on an EDDC web site that according to the LPA is not in their evidence library that, if correct, shows OBC Fig 7 and hence the CCMA along Cliff Road is based on a biased analysis of the "more detailed data". If that evidence is correct (or not challenged by the LPA) then the CCMA along Cliff Road is based on biased evidence, without explanation and justification, in which case it is not solid evidence and therefore it is not justified and sound.

2.1 EDDC's BMP web site <https://rb.gy/23xrvz> contains a CCMA FAQ section that, according to the LPA... *"was written to support the publication of the initial University of Plymouth work on coastal change in East Devon"*

2.2 In their email of 12 March 2025 at 1.2.2.b above, the LPA provided this summary:
"Effectively the 2017 BMP numbers were used as a starting point and revised upwards to reflect more recent/frequent cliff recession that occurred after the 2017 BMP work was done"

2.3 FAQ 17 partly explains... *'how the 2017 BMP numbers were revised upwards'*. That explanation is reproduced in the FAQ 17 box below.

In effect the answer to FAQ 17 explains... The BMP estimate of predicted cliff recession of 20.9 to 30.9 m in the next 100 years, that was based on a detailed analysis cliff recession from 1948 to 2015, was revised upwards to 92.5m in the next 100 years on the basis of **the suggestion... to be cautious the worst transect** (i.e., the transect with the worst erosion in the last decade) **should be used to predict cliff recession for the next 20 years** and *"the longer term average rates"* should be used to predict cliff recession for years 20 to 100.

2.4 The acknowledgement in FAQ17 that the ‘worst transect’ was used to predict cliff recession along the whole of Cliff Road for the next 20 years is evidence of a bias to the **worst-case scenario** for drawing the CCMA along Cliff Road.

Moreover FAQ 17 does not explain the following.

1. The ‘Halcrow calculation’ that was updated, involved the measurement of cliff recession along ten transects T30 to T342 (see glossary Fig 1)
2. Hence transect 31 is the worst of the 10 transects along East Cliff.
3. T31 is at the far western end of East Cliff in the middle of 4 faults (see Glossary Fig 2) hence it is not representative of erosion along the whole of Cliff Road.
4. FAQ 17 gives no reason for using the **worst-case scenario** except - “*to be cautious*” - and no explanation of why and for what purpose ‘caution’ was needed, is given.
5. Regarding the FAQ 17 text... “*The analysis also showed transect 31 erosion was higher than the others. Therefore, it was suggested to be cautious...*” there is no explanation why there was a need to be cautious simply because the erosion at transect 31 was higher than the others. It may have been higher than the others simply because the Mercia Mudstone cliff top at T31, recently slid over the harder Otter Sandstone (see fig 3 below) or because T31 is in the middle of a fault zone (see fig 2 below) which is more vulnerable to erosion than the rest of the cliff along Cliff Road.
Important geological details such as this were not mentioned in the explanation in FAQ17
6. The bias to the **worst-case scenario** to draw the CCMA along Cliff Road is contrary to CCMA FAQ 3 < <https://rb.gy/kq0pq9>> that explains: “*the reasonable worst-case scenario has been modelled for the CCMA*”.
7. FAQ 17 gives no evidence of how ‘*the longer-term average rates*’ were determined.

2.5 Hence if FAQ 17 is correct, then... because the CCMA along cliff Road is based on biased evidence for which no reason or justification is given, and the bias does not represent the reasonable worst-case scenario ...the CCMA along Cliff Road is not based on solid evidence and therefore it is not justified and sound

FAQ 3 - Why is the CCMA erosion rate in most places, much higher than long term study areas, such as Pennington Point and East Beach, and Seaton Hole?

Fundamentally, the difference is due to a reasonable worst-case scenario being modelled for the CCMA, and a most likely (actual) erosion rate being used for our studies. The CCMA rate also has additional 10m safety buffer, which is not included on our existing local studies.

FAQ 17 - Can you explain in detail why the erosion rates differ at East Beach in Sidmouth?

BMP (2016)

Assess erosion with two methods

- Historic maps between 1890-1991 = 0.19m/yr cliff top and 0.15m/yr cliff toe
- Aerial photograph 1946-2015 = 0.19-0.27m/yr cliff top and 0.25m /yr cliff top and 0.25m /yr cliff toe

Future prediction ~ 20.9m in 100 years or 30.9m with a nominal further 10m buffer

Initially the OBC adopted BMP values however a further study was requested to check on sensitivity of previous rates

RHDHV reassessed the Halcrow calculations by repeating their calculation and looking at the variation of these results over a short time or longer time and by section. It was found that the erosion was quicker in recent past/short term and slower over a longer-term past. The analysis also showed transect 31 erosion was higher than the others. Therefore, it was suggested to be cautious and the worst transect should be used with the first 20 years based on the higher rate and the latter years on the longer-term average rates.

From transect 31 the rates for 2006-2018 are 2.1m/yr and 1946-2018 are 0.6m/yr. The future loss is estimated at 92.5m over 100 years.

2.6 Glossary and figures to help understand FAQ 17

BMP - 2017 Beach Management Plan

OBC - 2023 Outline Business Case for the Beach Management Scheme

RHDHA - EDDC's consultants who produced the OBC

Halcrow (now CH2M) - EDDC's consultants who produced the 2017 BMP

The Halcrow calculations - The analysis of cliff recession, as reported in the BMP Baseline Coastal Process Report https://eastdevon.gov.uk/media/1676177/sidmouth-bmp_coastal-processes-baseline_final_20-01-2016.pdf - Chapters 5, 6 & 7 & appendix B

The 'rates for 2006-2018 are 2.1m/yr and 1946-2018 are 0.6m/yr.' - These rates are the same as shown on OBC fig 7 in S1.2.1

Transect 31 - this is one of 10 Transects (T 30 to 342) for East Beach used in the "Halcrow calculations".

Note: T31 is located in the middle of 4 geological faults between T29 and T32

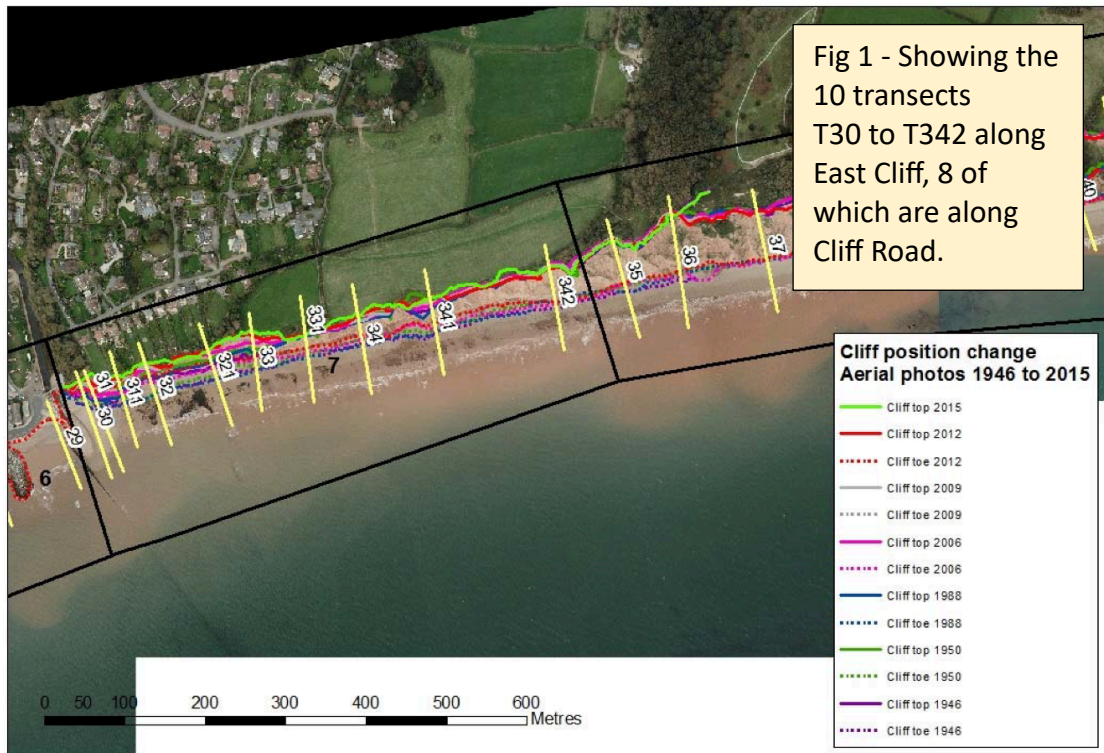
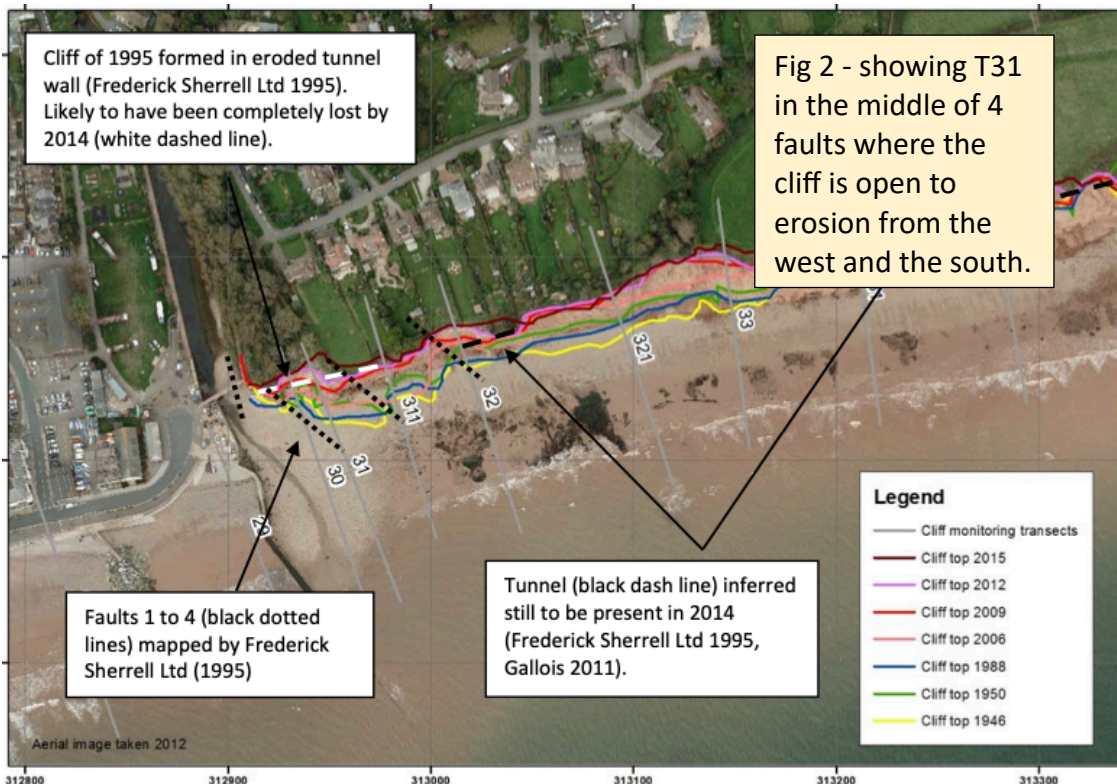


Fig 1 - Showing the 10 transects T30 to T342 along East Cliff, 8 of which are along Cliff Road.



CCMA along Cliff Road. The amended CCMA along Cliff Road runs from just before T30 to just past T331

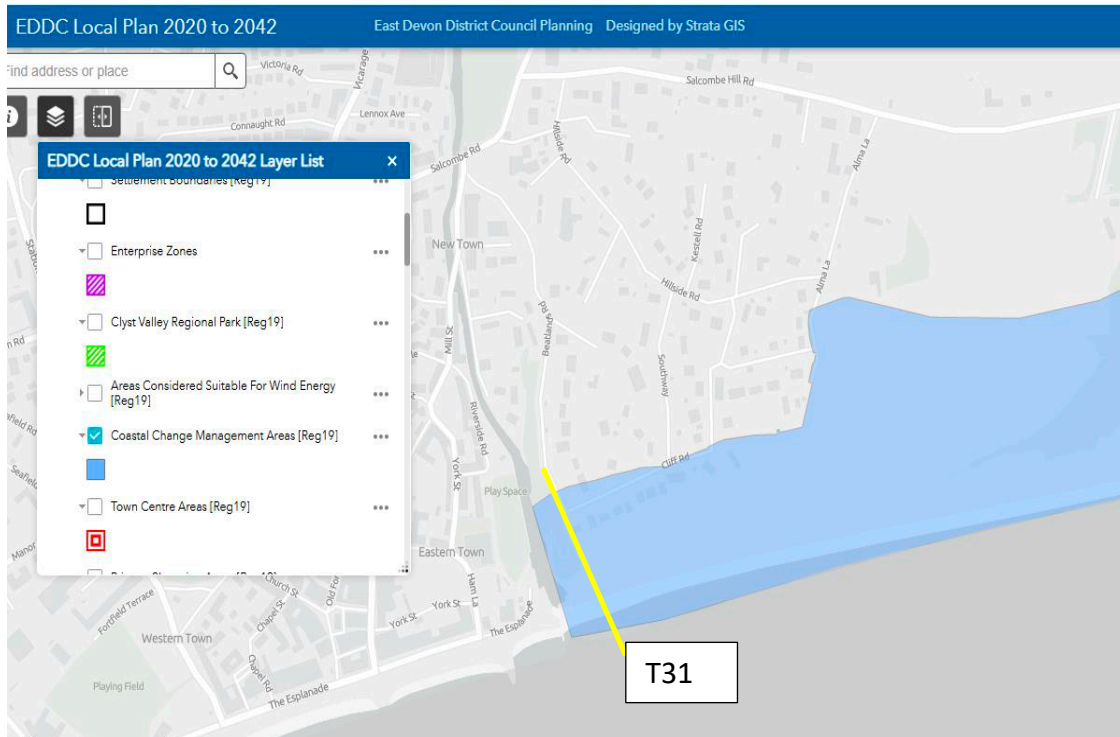


Fig 3 - T31 is near the left-hand edge of this image

Figure 2-10 Photograph showing view from the Salcombe Hill Cliff to Branscombe, looking east. Pennington Point, which is underlain by Otter Sandstone, is in the foreground. Dashed line shows approximate boundary between basal Otter Sandstone and overlying Mercia Mudstone. Photograph taken during site visit 9th December 2013.

3. There are the following errors in the Coastal change Topic Paper CCF-005 that affect the reasoning therein.

3.1 Para 4.5 states... "This includes constructions designed to slow the rate of erosion from the existing levels on which the University of Plymouth work is based". That statement is not

correct because the UoFP work did not reflect the ‘*constructions designed to slow the rate of erosion from the existing levels*’. That error is confirmed by para 4.6 that states.... “*It also reflects the fact that the Plymouth work was based on past erosion rates and did not take account of the proposed works at Sidmouth that will slow the rate of erosion*”.

That misunderstanding upsets the reasoning in 4.5 that is used to justify the use of the “*BMP OBC plan (i.e., fig 7 in the OBC) that shows a much slower rate of retreat than the Plymouth Study*” to draw the CCMA along Cliff Road.

3(c). Please set out the modification(s) you consider necessary to make this part of the Adapting to Climate Change chapter sound, in respect of any matters you have identified above. You will need to say why each modification will make this part of the Adapting to Climate Change chapter sound. It will be helpful if you are able to put forward your suggested revised wording for the relevant policy or paragraph. Please be as precise as possible.

Regarding:

- The CCMA map east of the River Sid in Sidmouth (along Cliff Road) is not justified because it is not based on solid evidence in the LPA evidence library - hence it is not sound - in section 1.
- There is evidence on an EDDC web site that according to the LPA is not in their evidence library that, if correct, shows OBC Fig 7 and hence the CCMA along Cliff Road is based on a biased analysis of the “more detailed data”. If that evidence is correct (or not challenged by the LPA) then the CCMA along Cliff Road is based on biased evidence, without explanation and justification, in which case it is not solid evidence and therefore it is not justified and sound - in section 2

Suggested modification to make the CCMA map along Cliff Road, sound.

In accordance with **the principle of considering recent evidence from detailed studies in the designation of a CCMA:**

1. Draw the northern boundary of the CCMA along Cliff Road in accordance with the 100-year cliff recession line as shown in Figure 7-1 on page 109 of the 2017 BMP’s Baseline Coastal Process report < <https://rb.gy/zw3vv7>>, where detailed, solid evidence for Figure 7-1 exists to justify using it to draw the CCMA along Cliff Road. Fig 7-1 is reproduced below.

Is there a reasonable alternative to the BMP prediction?

Is the OBC Fig 7 a reasonable alternative

It may be argued.... because Local Plan making should use up-to-date evidence, 2023 OBC evidence should be used in preference to the 2017 BMP evidence. Not with standing there is no OBC evidence except the sentence ... *“These rates were **updated** to use **more recent data**, as cliff erosion **appears** to have accelerated in the past decade.”* that would not be good coastal erosion risk management practice because, on its own the most up-to-date measurement of the rate of erosion is not an indicator of the future rate of erosion. For instance, the most up to date measurement of cliff recession may have been taken just after 5m of the cliff top fell to the beach, which would not be an indicator of the future erosion rate. Did that happen at Transect 31, we don't know. That is why long-term average of cliff recession is used to predict future rates. The longer the term the better.

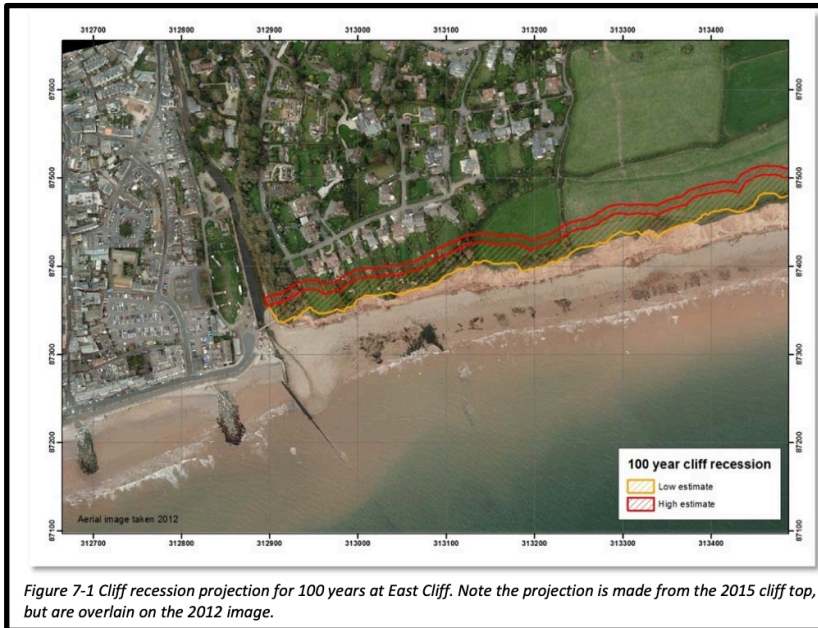
The predicted erosion rate in the BMP is based on a publicly available and detailed analysis of 67 years of recorded erosion, whereas the OBC rate is based on the sentence ...*These rates were **updated** to use **more recent data**, as cliff erosion **appears** to have accelerated in the past decade....* for which there is no evidence.

Is the Plymouth Study a reasonable alternative.

Bearing in mind the LPA decided OBC prediction was a reasonable alternative to the Plymouth prediction, it would be illogical for them to conclude the BMP prediction, which is far more robust than the OBC prediction, is not a reasonable alternative to the Plymouth prediction.

2. When the forthcoming Sidmouth and East Beach Management Scheme has been **designed** draw the northern boundary in accordance with the predicted recession prior to the construction of the scheme (which will be determined as part of the detailed design)
3. When the forthcoming Sidmouth and East Beach Management Scheme has been **constructed** draw the northern boundary in accordance with the predicted recession post construction of the scheme (which will be determined as part of the detailed design)
4. 5 to 10 years after construction of the Sidmouth and East Beach Management Scheme, adjust the northern boundary in accordance with the results of the analysis of monitoring since the scheme was constructed.

Note. The new Coastal Erosion Risk Mapping (NCERM) has been produced by the EA to inform Shoreline Management Plans. SMPs are high level plans that give way to detail in lower level, more detailed Beach Management Plans and Schemes. Therefore, it would be inappropriate to use the NCERM mapping to justify the Sidmouth CCMA along Cliff Road where a more detailed BMP exists and an Outline Business Case for a BMS has been produced



4. Do you consider that this part of the Adapting to Climate Change chapter complies with the duty to cooperate?

Select one option

Yes

No

No

4(a). If yes, and you wish to support this part of the Adapting to Climate Change chapter's compliance with the duty to cooperate, please use this box to set out your comments.

NA

4(b). If no, please give details of why you consider this part of the Adapting to Climate Change chapter fails to comply with the duty to co-operate. Please be as precise as possible.

The LPA did not co-operate with the portfolio holder for the Sidmouth and East Beach Management Scheme who is also chairman of its Advisory Group.

Please note that non-compliance with the duty to co-operate is incapable of modification at examination.

Please note In your representation you should provide succinctly all the evidence and supporting information necessary to support your representation and your suggested modification(s). You should not assume that you will have a further opportunity to make submissions.

After this stage, further submissions may only be made if invited by the Inspector, based on the matters and issues he or she identifies for examination.

5. If your representation is seeking a modification to the plan, do you consider it necessary to participate in examination hearing session(s)?

Select one option

No, I do not wish to participate in hearing session(s)

Yes, I wish to participate in hearing session(s)

Yes, I /we wish to participate in hearing sessions

Please note that while this will provide an initial indication of your wish to participate in hearing session(s), you may be asked at a later point to confirm your request to participate.

6. If you wish to participate in the hearing session(s), please outline why you consider this to be necessary.

To clarify anything that is not clear in this response and to respond to any rebuttals the LPA may make prior to or at the examination.

Please note the Inspector will determine the most appropriate procedure to adopt to hear those who have indicated that they wish to participate in
Your email address will not be published anywhere, and it will be used only for the purposes of contacting you regarding the hearing sessions.

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