[redacted]

From: [redacted]
Sent: 16 January 2022 18:29
To: [redacted]
Subject: Fwd: WATER FLUORIDATION . CABINET MEETING 27th. JANUARY 2022
Attachments: ATTACHMENT 1 (1) (1).docx; ATTACHMENT 2 (1) (1).docx; ATTACHMENT 3 (1) (1).docx; 2nd letter to Boris Johnson - final version 27Dec21 (2) (1).pdf

I don't think you were copied into this email.
We can discuss tomorrow.
Hope you have had a nice weekend.
---------- Forwarded message ----------
From: [redacted]
Date: 16 Jan 2022 12:14
Subject: WATER FLUORIDATION . CABINET MEETING 27th. JANUARY 2022
To: [redacted]

January, 2022

WATER FLUORIDATION IN CUMBRIA

Dear Members of the Cabinet,

1. We have been made aware that a report on water fluoridation in Cumbria (the "Report") from the Scrutiny Management Board (SMB) has been submitted to Cabinet for approval at the meeting scheduled for 27 January, 2022. We believe the Report to be fundamentally flawed.

2. Our attempts to get a more balanced and comprehensive review of the issues surrounding water fluoridation are being rebuffed and largely ignored.

3. A "Task and Finish Group" chaired by Councillor Stephen Haraldsen submitted a draft of the Report to the SMB for approval on 24 November, 2021. Having seen the draft Report prior to the meeting, we were concerned that some fundamental questions had been overlooked. We therefore requested the chairman of the SMB that eight issues were addressed as part of the debate at the SMB of the draft Report (Attachment 1). **The request was refused.**

4. Public participation was not permitted at the SMB meeting on 24 November, 2021 but a number of us were "silent witnesses" to proceedings. The Report was presented by Councillor Stephen Haraldsen who also answered questions raised by fellow members of the SMB. The presentation and subsequent debate contained misleading statements and factual inaccuracies. When we asked, after the meeting, if Councillor Stephen Haraldsen would be prepared to debate our concerns, **our request was refused.**

5. Undaunted, we wrote to Councillor Stephen Haraldsen on 14 December, 2021 asking for comment on three issues: public consultation; legal status of fluoridated water and medical ethics and patient consent, which were the source of misleading statements and factual inaccuracies. **He refused to "*respond to the substance of the letter*"**

6. Given that the Report is submitted for Cabinet approval on 27 January, 2022 and our attempts to add balance to the Report have been repeatedly rebuffed, we have felt it necessary to point out the shortcomings and misleading information in the Report. A copy in "Executive Summary" form is attached for your information (Attachment 2) with a more comprehensive, fully referenced version as Attachment 3.

7. We urge you to read the attached information (also sent to all councillors individually), which additionally includes a letter to the Prime Minister written by the two Professors who presented to the CCC Task and Finish group and relates to the **threat to the developing infant brain** and we respectfully request that the Report **is not approved by Cabinet** unless and until the issues we have raised are fully explored and resolved.

Yours Sincerely

[redacted]

ATTACHMENT 1

CUMBRIA COUNTY COUNCIL

FLUORIDATION OF WATER SUPPLIES - TASK AND FINISH GROUP DRAFT REPORT

OBSERVATIONS AND COMMENTS

1. BACKGROUND

1.1 Water fluoridation in Cumbria is at a unique crossroads. The current Water Treatment Works (WTW's) at Cornhow and Ennerdale (which supply fluoridated water to Cumbria) are shortly to be de-commissioned and replaced by a new WTW at Williamsgate. Decisions will therefore need to be made by the local authority on the future of water fluoridation in Cumbria.

1.2 The Scrutiny Management Board have established a Task and Finish Group to investigate the risks and benefits of water fluoridation in relation to a number of issues. A draft report by the Task and Finish Group has been prepared (http://councilportal.cumbria.gov.uk/documents/g11486/Public%20reports%20pack%2024th-Nov-2021%2010.00%20Scrutiny%20Management%20Board.pdf?T=10 Pages 37 to 247 inclusive) and will be presented for approval by the Scrutiny Management Board on Wednesday 24 November 2021.

2. OVERALL IMPRESSIONS

2.1 Any scrutiny of water fluoridation is a comprehensive and difficult task. The Task and Finish Group were to address a limited number of issues but inevitably strayed into other areas. The purpose of this short note is **not** to debate the rights and wrongs of water fluoridation per se but to ask some **fundamental questions** which seem to have been overlooked.

3. HEALTH WARNINGS

3.1 Why are the health warnings on fluorides neurotoxicity being ignored?

This is probably the most fundamental question pertaining to the current fluoridation debate.

Since 2017 there have been important findings from very high-quality, US government funded studies which indicate that fluoride – at the exposure levels found in fluoridated

communities – can impact the brain in various ways. The weight of evidence is now irrefutable. The risks to foetal and infant brain development far outweigh any benefits to teeth – damage to a tooth can be repaired; but not damage to the brain.

Public servants, with their duty of care, would be well advised to reflect on the deliberate addition of fluoride to the public water supply to reduce dental decay (with its questionable efficacy and safety) being preferable to protecting foetal and infant brain development.

***** SEE NOTE 1**

4. STATUS OF CURRENT FLUORIDATION SCHEME

4.1 **When Williamsgate becomes operational, is the existing fluoridation scheme to be terminated, varied, or introduced as a new scheme?**

A simple question to ask, but one which the local authority has been unwilling or unable to answer for nearly 3 months. It is not a trick question but is consistent with current legislation which would require the Cumbrian public to be consulted for the **first time** on water fluoridation.

4.2 **What is the point of "scrutinising" water fluoridation in Cumbria when the decision has already been made to finance and install the fluoridating equipment in the Williamsgate Water Treatment Works?**

On page 47 of the Draft Report the following statement appears: *"Members were appraised of that fact that there is no additional cost to maintaining the current scheme as the capital works at the Williamsgate treatment plant **were met** by central government".*

5. LEGAL STATUS OF FLUORIDATED WATER

5.1 There is a statement in the draft report (page 46) that *"Members were assured that fluoridation is not classified as a medicine under UK legislation"*

5.2 **If fluoridated water is <u>not</u> a medicine, then what is it?**

Ingestible substances are classified as either foods, medicines, or poisons – which leads to a supplementary question: -

5.3 **How can medicinal claims be made (e.g. reducing dental decay) for fluoridated water if it isn't a medicine?**

It is unlawful to make medicinal claims for a product which does not have a marketing authorisation (licence issued by the MHRA). "Assurances" given to members may not be much consolation if the legal status of water fluoridation is challenged and they become potentially liable to prosecution. Water companies are indemnified against legal action; Public Health England have distanced themselves from offering legal advice (ref https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/953333/Fluoridation_Toolkit_V1.7.pdf Page 11); which leaves local authorities fully exposed to potential litigation. It is therefore surprising that Cumbria County Council is prepared to rely on "assurances" rather than seeking the necessary independent legal advice.

6. SAFETY

6.1 If fluoridation is safe why has there never been any randomised clinical trials to prove its safety?

In the 60-year history of water fluoridation in this country there has never been a single randomised clinical trial to verify its safety which is probably why fluoridated water has never been approved by the MHRA. Furthermore, there is no margin of safety to protect vulnerable groups within the population.

7. ETHICS

7.1 Why is it considered right to override an individual's right to choose a medical treatment when fluoride is available from sources other than the water supply?

Dental decay is **not** *"a significant public health problem"* (page 71) – it is universally in decline and is neither contagious nor life threatening – unlike COVID where individuals were given a choice of accepting, or not, vaccination. Furthermore, for those who may choose to use fluoride, it is available from sources other than the water supply.

8. COST

8.1 Why is Cumbria County Council currently paying twice as much for water fluoridation than the national average cost?

The statement on page 47 of the Draft Report *"that Members noted that the distinction between capital and revenue costs needs to be clarified up front"* seems to indicate a naïve appreciation of the true costs of water fluoridation.

8.2 Whilst *"central government"* may initially fund capital costs and capital replacement costs they **reserve the right to recover these costs from local authorities.** This "right" is enshrined in current legislation and in the proposed legislation changes in the Health and Care Bill 2021. There is evidence that such cost recovery is taking place and is probably why Cumbria is currently paying so much for water fluoridation (recovering the costs of "capital replacement" at the Cornhow and Ennerdale WTW's).

NOTE 1:

For those who follow the science on fluoride toxicity it is ironic that while Breaker and others (2012) have shown that nature has developed defence mechanisms to protect bacteria and fungi from the toxic fluoride ion by switching on proteins which pump it out of the cell and away from the vulnerable biochemical mechanism with which it interferes, the dental community in an effort to harness fluoride's surface action on the tooth enamel, is prepared to expose the amniotic fluid of a one day old foetus to this same toxic ion. And is prepared to do so even though strong scientific evidence (e.g., US government funded studies - Bashash, 2017, 2018; Green, 2019 and Till, 2020) published since 2017, is indicating that fluoride - at doses experienced in fluoridated communities -is associated with foetal and infant brain damage in the form of substantially lowered IQ and increased symptoms of ADHD.

ATTACHMENT 2

December, 2021

CUMBRIA COUNTY COUNCIL

FLUORIDATION OF WATER SUPPLIES - TASK AND FINISH GROUP REPORT

RESPONSE FROM FLUORIDE FREE CUMBRIA

EXECUTIVE SUMMARY

1. BACKGROUND

1.1 Water fluoridation in Cumbria is at a unique crossroads. Firstly, the current Water Treatment Works (WTW's) at Cornhow and Ennerdale (which supply fluoridated water to parts of west Cumbria) are shortly to be de-commissioned and replaced by a new WTW at Williamsgate. Under current legislation, this will require a decision to be taken as to whether the fluoridation scheme is terminated, varied, or considered as a new scheme.

1.2 Secondly, the CATFISH (Cumbria Assessment of Teeth – a Fluoride Intervention Study for Health) project has been running for 7 years and, with the findings currently being peer reviewed, it should shortly provide some quantitative evidence on the effectiveness of water fluoridation.

1.3 Thirdly, because some local authority areas of Cumbria (Allerdale and Copeland) are fluoridated and other local authority areas of Cumbria (Barrow-in-Furness, Carlisle, Eden and South Lakeland) are NOT fluoridated, it is possible to make dental health comparisons between fluoridated and non-fluoridated areas.

1.4 Against this background, Cumbria County Council have undertaken a "scrutiny review" of the fluoridation of water supplies with the aim of providing valuable additional information. The project outline of which has the following aims and objectives: -

1.4.1 *To investigate the benefits and risks of fluoridation of water supplies to inform future decision-making in respect of fluoridation in Cumbria*

1.4.2 *To specifically investigate risks and benefits in relation to: -*

- *The safety of fluoridation of water supplies;*
- *The effectiveness of fluoridation of water supplies in improving dental health; and,*
- *The cost effectiveness of the fluoridation of water supplies compared to alternatives.*

1.4.3 *To identify findings and develop recommendations to inform future decision-making in respect of fluoridation of water supplies.*

2. TASK AND FINISH GROUP

2.1 The Scrutiny Management Board (SMB) of Cumbria County Council established a Task and Finish Group to investigate the risks and benefits of water fluoridation with the aims and objectives outlined in paragraphs 1.4.1 to 1.4.3 above. A draft report by the Task and Finish Group has been prepared (http://councilportal.cumbria.gov.uk/documents/g11486/Public%20reports%20pack%2024th-Nov-2021%2010.00%20Scrutiny%20Management% s.pdf?T=10 Pages 37 to 247 inclusive – herein after referred to as the **"Report"**) and was presented for approval by the Scrutiny Management Board (SMB) on Wednesday 24 November 2021.

2.2 The Report was presented to the SMB by the chairman of the Task and Finish Group, Councillor Stephen Haraldsen, who went on to answer a number of questions raised by members of the SMB during the subsequent debate and approval of the Report for submission to Cabinet members of Cumbria County Council.

2.3 It was emphasised by both the chairman of the SMB, Councillor Bill Wearing, and the chairman of the Task and Finish Group, Councillor Stephen Haraldsen, that the review only covered the **existing water fluoridation scheme** in west Cumbria and that the SMB **were not the decision-making authority** on water fluoridation – they were passing recommendations for decision-making to Cabinet. Accuracy in the Report is therefore considered essential.

3. THE "REPORT"

3.1 Having carefully considered the Report and being present for the debate and subsequent acceptance of the Report at the SMB on 24 November 2021, it is felt necessary to point out several shortcomings, misleading statements and factual inaccuracies both in the Report and the SMB debate of it. Comments are restricted to the main issues rather than a point-by-point rebuttal of the content of the Report.

3.2 Only key extracts from the comments on the Report are included in this Summary, with all the back-up narrative and evidence in the main body of this response.

"To investigate the benefits and risks of fluoridation of water supplies to inform future decision-making in respect of fluoridation in Cumbria"

4. DENTAL HEALTH STATUS OF CHILDREN IN CUMBRIA

4.1 **The Scrutiny Management Board FAILED to take account of the dental health status of children in Cumbria.**

4.2 There has been a water fluoridation scheme operating in west Cumbria for around 50 years which may, or may not have some effect on the dental health of children living in that area. Assessing the current dental health status of children in Cumbria is considered fundamental to any review of water fluoridation. It seems sensible to ask two basic questions**: is water fluoridation in Cumbria doing any good? Is it needed?** What would be the point of conducting any "scrutiny review" if the answers to both these questions was negative?

4.3 **Is water fluoridation in Cumbria doing any good?**
Using both historical and more recent children's dental health data for Cumbria, the answer to this question is **NO**. For nearly 40 years, children's dental health in Cumbria has progressively improved **without water fluoridation making any incremental difference.** Dental decay rates are currently low (0.8 dmft) and consistent with the national average. Hospital admissions for dental caries (tooth extractions) are amongst the lowest in the country.

4.4 **Is it needed?**
The available data would suggest that there has been **no benefit from water fluoridation** for nearly 40 years compared with other preventative measures. It is therefore highly improbable, given the low underlying level of dental caries, that there will be any future benefits. To make a significant financial investment to continue water fluoridation in Cumbria makes neither economic nor dental health sense.

5. ORAL HEALTH BENEFITS

5.1 **The Scrutiny Management Board FAILED to take account of any oral health benefits specific to the current water fluoridation scheme in Cumbria.**

5.2 There are references in the Report to the *"……known oral health benefits of water fluoridation….."* and to *"…..oral (dental) health benefits outweighing other considerations…."* although no attempt was made to either review or assess the current situation in Cumbria.

5.3 When oral health improvement data are examined specific to Cumbria there is a clear indication that there is no beneficial effect from water fluoridation over and above existing oral health measures. **The "known" oral health benefits from water fluoridation in Cumbria are NEGLIBLE.**

6. FLUORIDE NEUROTOXICITY

6.1 **The local authority is FAILING in its duty of care to advise pregnant women not to consume fluoridated tap water, nor to make infant formula with it.**

6.2 The weight of evidence is now irrefutable on the neurological damage to foetal and infant brains by fluoride at the levels found in water fluoridation schemes. The reasons

given by the SMB for ignoring this evidence are **ill-founded and wrong.** Ignoring this evidence, in the words of one member of the SMB, would be *"…. foolish and reckless…."*. Why they chose to do so is incomprehensible.

7. COST EFFECTIVENESS OF WATER FLUORIDATION

7.1 **The Task and Finish Group FAILED to investigate the cost effectiveness of the fluoridation of water supplies compared to alternatives.**

7.2 The Task and Finish Group were supposed to investigate *"The cost effectiveness of the fluoridation of water supplies compared to alternatives".* **They didn't.** No comparisons to other *"alternatives"* were made – had they been, then the Group would have found that water fluoridation is the **least cost effective** of a number of oral health improvement programmes.

7.3 This "failure" was further exacerbated by an apparent naive grasp of the costs being incurred by Cumbria County Council for the current water fluoridation scheme.

8. PUBLIC CONSULTATION

8.1 **The Task and Finish Group MISLED the SMB over the need for public consultation**

8.2 A member of the Scrutiny Management Board (Councillor Philip Dew) specifically asked the question *"will public consultation be needed for the 'new' scheme from Williamsgate"?* The response from the chairman of the Task and Finish Group (Councillor Stephen Haraldsen) was, (paraphrased): *"It is NOT a 'new' scheme; it is a **continuation of an existing scheme**; therefore, public consultation is not needed".* This is **wrong and misleading.**

8.3 Under current legislation, there is no such thing as a *"continuation of an existing scheme".* Water fluoridation schemes can only be **"new", "varied"** or **"terminated"** and whichever one is chosen, **a public consultation is needed.**

9. LEGAL STATUS OF FLUORIDATED WATER

9.1 **The Task and Finish Group MISLED the SMB over the legal status of fluoridated water**

9.2 The Report (Page 46) stated *"…. that fluoridation is not classified as a medicine under UK legislation"* and during the presentation of the Report to the SMB on 24 November 2021, Councillor Stephen Haraldsen stated *"the legal position on water fluoridation is very clear – it is not a medicine"*. Both statements **are wrong.**

9.3 Distinction needs to be drawn between the legality of the **process** (adding fluoride to the public water supply) and the **product** (fluoridated water). Whilst the former may be "legal", the latter is not. Unless and until the legal status of fluoridated water is confirmed, it is unlawful to make medicinal claims (e.g., reducing dental caries) for an unlicensed

medical product. This leaves local authorities fully exposed to potential criminal and civil litigation.

10. MEDICAL ETHICS AND PATIENT CONSENT

10.1 **The Task and Finish Group MISLED the SMB over ethical issues of water fluoridation**

10.2 During the debate of the draft Report concerns were raised over the ethical issues surrounding water fluoridation. In particular, the need for patient consent to receive a form of medication.

10.3 The response from the chairman of the Task and Finish Group, Councillor Stephen Haraldsen was (paraphrased) *"Fluoridated water is NOT a medicine; so, we are NOT medicating, so consent is not needed".* This is a **preposterous notion and fundamentally wrong.**

10.4 Fluoridation counts as a medical intervention in the terms of the European Convention on Human Rights and Biomedicine. The ethical issues and the need for patient consent **cannot be swept under the carpet.**

11. SUMMARY AND CONCLUSIONS

11.1 We started this response by highlighting that the Report (produced by the Task and Finish Group) and the subsequent debate of it, and acceptance of it, by the Scrutiny Management Board, had several shortcomings, misleading statements and factual inaccuracies. The shortcomings are: -

- A **failure** to take account of the dental health status of children in Cumbria
- A **failure** to take account of any oral health benefits specific to the current water fluoridation scheme in Cumbria
- A **failure** in its duty of care to advise pregnant women not to consume fluoridated tap water or to make infant formula with it
- A **failure** to investigate the cost effectiveness of the fluoridation of water supplies compared to alternatives

11.2 These **failings** were compounded by **misleading statements**: -

- **Misled** over the need for public consultation
- **Misled** over the legal status of fluoridated water
- **Misled** over the ethical issues of water fluoridation

11.3 Factual inaccuracies persist throughout the Report and the Recommendations are ill-founded and inappropriate.

11.4 Water fluoridation is a complex and controversial subject. It is a public health measure which is currently affecting around 120,000 people in Cumbria. Scrutiny of such a measure is not for the faint-hearted or a subject which can be glossed over. Impartiality and thoroughness are crucial. The work of the Task and Finish Group and its Report fall well short of these expectations.

11.5 Impartiality is compromised by the inequity in attendance and questioning at Witness Sessions and the treatment of evidence. No account was taken of the **quality** of the evidence being reviewed and an apparent political bias permeated the acceptance of information presented by dental and public health professionals. Heavy reliance was placed on a re-statement of old positions rather than an independent assessment of new, good quality, scientific evidence.

11.6 Lack of thoroughness is evident in the failings and misleading statements identified above in paragraphs 11.1 and 11.2.

11.7 In conclusion, the aim of the scrutiny review was "to provide valuable additional information". **It provided little of value and little of addition which would be helpful in informing future policy.**

ATTACHMENT 3

December, 2021

CUMBRIA COUNTY COUNCIL

FLUORIDATION OF WATER SUPPLIES - TASK AND FINISH GROUP REPORT

RESPONSE FROM FLUORIDE FREE CUMBRIA

1. INTRODUCTION

1.1 The Scrutiny Management Board of Cumbria County Council established a Task and Finish Group to investigate the risks and benefits of water fluoridation in relation to a number of issues. A draft report by the Task and Finish Group has been prepared (http://councilportal.cumbria.gov.uk/documents/g11486/Public%20reports%20pack%2024th-Nov-2021%2010.00%20Scrutiny%20Management% s.pdf?T=10 Pages 37 to 247 inclusive – herein after referred to as the **"Report"**) and was presented for approval by the Scrutiny Management Board (SMB) on Wednesday 24 November 2021.

1.2 Having carefully considered the Report and being present for the debate and subsequent acceptance of the Report at the SMB on 24 November 2021, it is felt necessary to point out several shortcomings, misleading statements and factual inaccuracies both in the Report and the SMB debate of it. Comments are restricted to the main issues rather than a point-by-point rebuttal of the content of the Report.

"To investigate the benefits and risks of fluoridation of water supplies to inform future decision-making in respect of fluoridation in Cumbria"

2. A REVIEW OF THE EXISTING FLUORIDATION SCHEME IN CUMBRIA

2.1 It was emphasised (by Councillor Stephen Haraldsen) in the presentation of the Report to the SMB that this "**was a review of the existing scheme"** [in Cumbria]. It therefore seems illogical and odd that no reference is made, or account taken of, the current dental health status of children in Cumbria. Instead, there is heavy reliance on the presentation material from promoters of fluoridation (Witness Session 2 – there is an error on Page 67 of the Report which introduces this session as: *"The second group session met to hear the case **against** Water fluoridation"* [my emphasis]).

2.2 This presentation material gives a general view of children's dental health, and water fluoridation's connection with it, which is **distinctly different** to the situation in Cumbria. Had the Task and Finish Group taken cognisance of the current dental health status of children in Cumbria they may well have reached a different conclusion to water fluoridation

"…..having a clear benefit to dental health" (statement by Councillor Stephen Haraldsen in presenting the Report to the SMB)

3. IS WATER FLUORIDATION IN CUMBRIA NEEDED AND WILL IT DO ANY GOOD?

3.1 There has been a water fluoridation scheme operating in west Cumbria for around 50 years which may, or may not have some effect on the dental health of children living in that area. Assessing the current dental health status of children in Cumbria is considered fundamental to any review of water fluoridation. It would seem sensible to ask two basic questions**: is water fluoridation in Cumbria doing any good? Is it needed?** What would be the point of conducting any "scrutiny review" if the answers to both these questions was negative?

3.2 There seems to have been little or no consideration of these two fundamental questions for either the current fluoridation scheme or the future of water fluoridation in Cumbria. The Task and Finish Group went so far as to dismiss the relevance of the CATFISH (Cumbria Assessment of Teeth – a Fluoride Intervention Study for Health) report as *"….only likely to give findings about one aspect of the review – oral health"* (Page 45 of the Report). **Oral health is the primary reason for even considering water fluoridation**. Does the oral health status of Cumbria **need** water fluoridation and **will it do any good?** If the answer to both is NO then there is arguably no point in considering water fluoridation's safety, effectiveness, legality, etc.

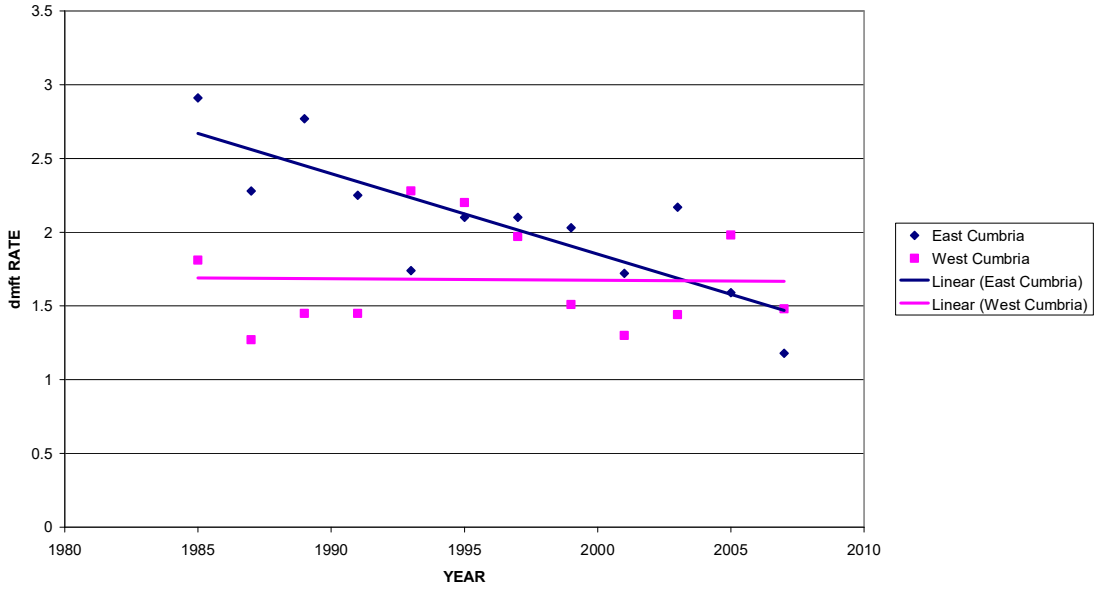
Local (Cumbria) data are available and a selection are presented below: -

3.3 Historical trends in children's dental health in Cumbria

3.3.1 Historical data are available on children's dental health data going back to 1985 up to the temporary cessation of fluoridation in 2006. The data, from BASCD Surveys [1], are in the form of decayed, missing and filled teeth for 5-year-old children (dmft) and 12-year-old children (DMFT). These data are provided for East Cumbria (which did not receive

fluoridated water) and West Cumbria (some of which did receive fluoridated water).

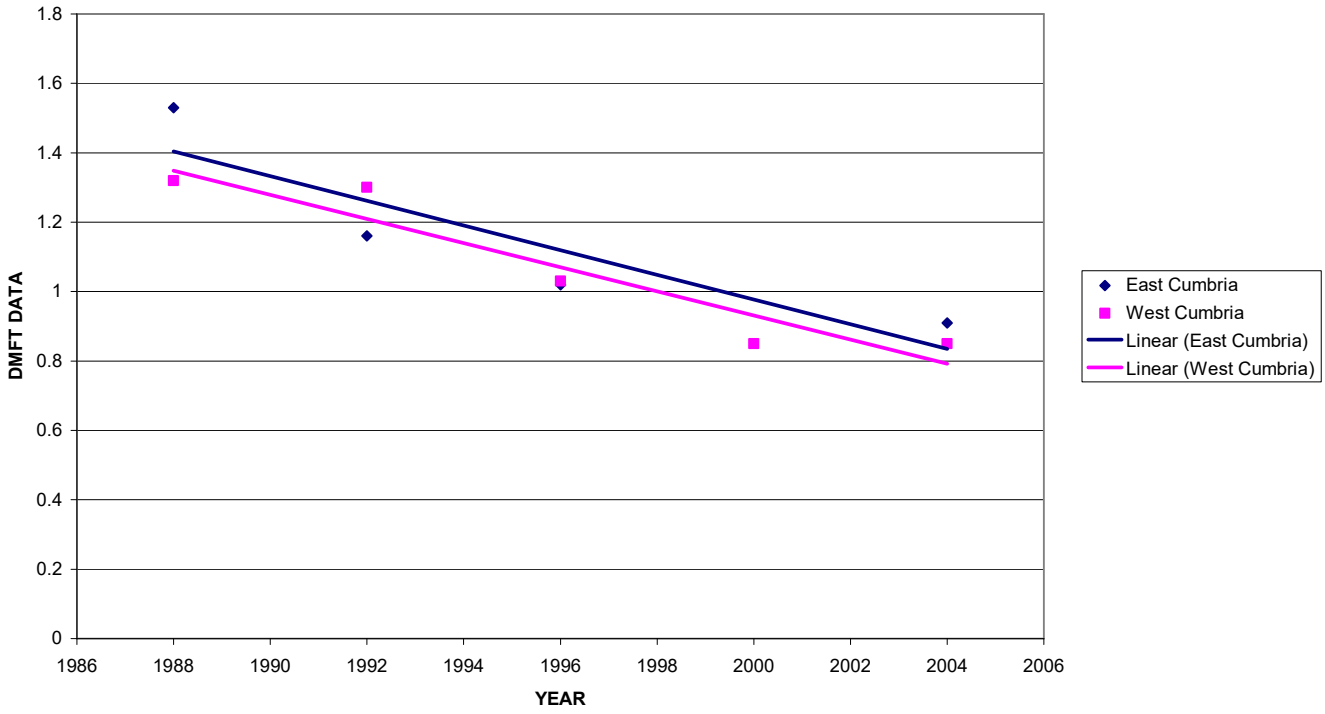
FIG 1 - dmft RATES FOR 5 YEAR OLD CHILDREN IN CUMBRIA



3.3.2 If Fig 1 is examined, it is quite clear that East Cumbrian children fared better than their West Cumbrian counterparts. Dental decay progressively reduced by almost half in East Cumbria over the 20-year period, **independent of water fluoridation**, and was at or below the level in West Cumbria. Dental decay amongst 5-year-old children in West Cumbria remained fairly constant over the same period which would indicate **there was NO beneficial effects from water fluoridation.**

3.3.3

FIG 2 - DMFT DATA FOR 12 YEAR OLD CHILDREN IN CUMBRIA



Similarly, in Fig 2, dental decay in 12-year-old children showed little or no difference between East and West Cumbria, again showing **NO beneficial effects from water fluoridation**.

3.4 Current trends in dental health of 0-5-year-old children in Cumbria

3.4.1 The dental health of 0-5-year-old children is surveyed bi-annually and published by the National Health Service (NHS) Dental Epidemiology Programme for England [2] (formerly known as the "BASCD Surveys"). Two measures of dental health are used: -

- **Severity** – mean number of teeth with experience of dental decay (dmft)
- **Prevalence** - % of 5-year-old children with experience of decay (% dmft > 0)

3.4.2 Data extracted from these NHS Surveys are presented below for each of the six lower tier local authorities in Cumbria for five annual periods from 2008 to 2019

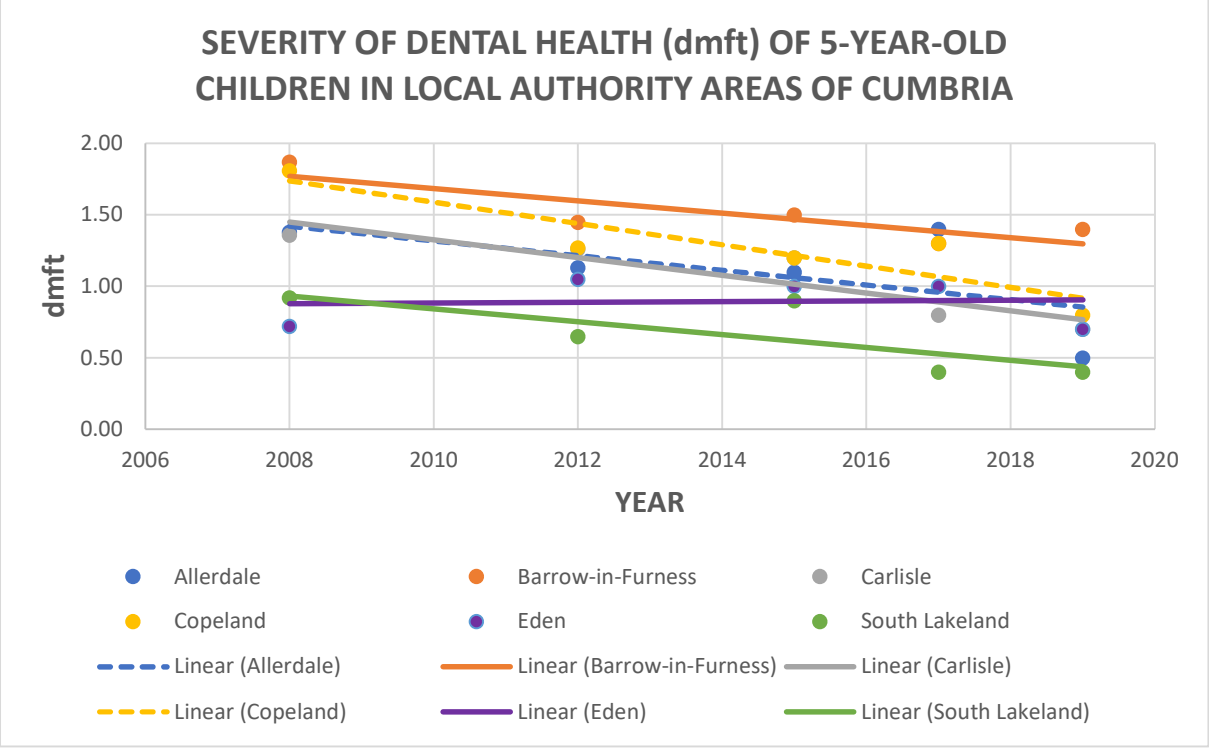
Area	2019		2017		2015		2012		2008	
	dmft	%dmft>0	dmft	%dmft>0	dmft	%dmft>0	dmft	%dmft>0	dmft	%dmft>0
	SEVERITY	PREVALENCE	SEVERITY	PREVALENCE	SEVERITY	PREVALENCE	SEVERITY	PREVALENCE	SEVERITY	PREVALENCE
Allerdale	0.5	18.7	1.4	37.9	1.1	29.5	1.13	35.2	1.38	36.5
Barrow-in-Furness	1.4	30.3	1.3	36.1	1.5	41.7	1.45	31.5	1.87	39.7
Carlisle	0.7	25.5	0.8	23.6	1.2	32.2	1.26	33.0	1.36	36.5
Copeland	0.8	26.9	1.3	35.1	1.2	34.8	1.27	34.8	1.81	44.7
Eden	0.7	25.3	1.0	23.9	1.0	29.1	1.05	29.8	0.72	27.7
South Lakeland	0.4	18.4	0.4	14.2	0.9	21.6	0.65	25.8	0.92	25.7

[To read with greater ease, in Word, select View, select Zoom and choose 200%, OK]

3.4.3 When looking at the table above it is important to remember that: -

- These data do not necessarily show any causal link between dental health and area (e.g., “area A has better dental health **because** of water fluoridation”)
- The fluoridated areas of Cumbria are Allerdale and Copeland
- The fluoridation scheme was inoperative from 2006 to 2013
- 5-year-old children in 2008 would have had benefit from fluoridation
- Those born after 2006 would not
- The survey results for 2012, 2015 and 2017 would show that NONE of the children had benefited from water fluoridation.

3.4.4 These data are presented graphically below: -



3.4.5 Observations:

(i) The data points from the table above (severity of dental health – dmft - are plotted against years) for each of the 6 lower tier local authorities in Cumbria and the “best fit” straight line drawn for the data points to show a trend from 2008 to 2019.

(ii) The trend lines for the fluoridated areas (Allerdale and Copeland) are shown dotted to make it easier to distinguish them from unfluoridated areas.

(iii) An interesting fact: children who at 5 years old (i.e., born after 2006 when fluoridation ceased) who did **not** receive fluoridated water in Allerdale and Copeland (1.13 and 1.27 dmft respectively in 2012) had **better dental health** than 5-year-old children who "benefited" from fluoridation measured 5 years previously (1.38 and 1.81 dmft respectively).

(iv) If fluoridation was the only factor affecting decay rates, the expectation would be that decay rates would increase or remain constant in Allerdale and Copeland. Instead, they continued reducing indicating **other factors are contributing to reductions in decay.**

(v) If the trend line for Eden (the purple line which is almost horizontal, indicating no change in dental health) is put aside, then there is little to choose in the improvements in dental health (the slope or gradient of the lines) between fluoridated areas (Allerdale and Copeland) and the unfluoridated areas (Barrow-in-Furness, Carlisle and South Lakeland). This would seem to indicate that the improvements in dental health are **independent of fluoridation status** i.e., fluoridation is having **no incremental effect** over and above other dental health improvement factors.

3.4.6 In summary, using data from the bi-annual surveys, published by the National Health Service (NHS) Dental Epidemiology Programme for England, there has been a progressive improvement in the dental health of 5-year-old children in Cumbria for the period from 2008 to 2019. **All the indications are that these improvements are <u>unconnected to water fluoridation.</u>**

3.5 Hospital admissions for dental caries in Cumbria

3.5.1 An "emotive" case is sometimes made e.g., *"It* [tooth decay] *is the highest cause of hospitalisations of children aged 6-10 and hospital treatment of 0-19 years cost approximately £50 million/year"* (Page 67 and Appendix of the Report). But what is the situation in Cumbria?

3.5.2

Compared with England: Not compared

Recent trends: – Could not be calculated; No significant change; Increasing; Decreasing

Hospital admissions for dental caries (0-5 years) 2017/18 - 19/20 — Crude rate - per 100,000

Area	Recent Trend	Count	Value	95% Lower CI	95% Upper CI
England	–	34,771	286.2	283.2	289.3
North West region	–	7,045	446.8	436.4	457.3
Blackpool	–	320	1,055.1	948.8	1,184.2
Blackburn with Darwen	–	350	905.6	808.3	1,000.1
Liverpool	–	770	726.7	676.3	779.9
Wigan	–	485	725.2	659.2	789.5
Bolton	–	485	692.7	631.1	755.7
Lancashire	–	1,600	654.8	623.1	687.7
Manchester	–	720	529.1	491.8	569.9
Tameside	–	260	495.5	433.5	555.5
Oldham	–	280	462.4	409.8	519.9
Rochdale	–	250	455.9	399.4	514.1
Salford	–	285	450.1	400.8	507.2
Knowsley	–	160	446.0	377.0	517.7
Stockport	–	270	420.8	373.6	475.7
Bury	–	175	404.5	342.5	464.2
Sefton	–	180	342.6	297.9	400.6
St. Helens	–	85	228.7	182.6	282.8
Trafford	–	120	223.8	183.8	265.6
Cheshire East	–	90	122.0	96.9	148.4
Warrington	–	45	103.5	75.5	138.4
Halton	–	25	89.2	60.6	135.9
Cheshire West and Chester	–	55	81.2	59.9	104.1
Wirral	–	20	30.3	18.5	46.8
Cumbria	–	20	22.8	14.8	36.6

[To read with greater ease, in Word, select View, select Zoom and choose 200%, OK]

The table above is extracted from **ref 3** and gives a "count" of the number of hospital admissions for dental caries for 0-5-year-old children and a "value" which is a crude rate per 100,000 of the total population. Cumbria sits at the bottom of the table having the **fewest** hospital admissions.

3.5.3 Similarly, the following data are extracted from **ref 4**

A count of finished admission episodes with a primary diagnosis of tooth decay and a primary procedure of tooth extraction for patients under 18 years of age 2016-17 to 2018-19

	2016-17	2017-18	2018-19
North Cumbria University Hospitals NHS Trust	20	15	10
Cumbria Partnership NHS Foundation Trust	75	15	-
ENGLAND TOTAL	37493	36744	35832
Lancashire Teaching Hospital NHS Trust	850	930	735
East Lancashire Hospitals NHS Trust	900	940	855

3.5.4 The data from neighbouring Lancashire and the total for England are included to put the data for Cumbria into perspective i.e., Cumbria has less than 5% (1/20th) of the problem in neighbouring Lancashire.

3.5.5 Relating these two sets of data to the opening statement - *"It* [tooth decay] *is the highest cause of hospitalisations of children aged 6-10 and hospital treatment of 0-19 years cost approximately £50 million/year".* It may be true at a national level, but it isn't a problem in Cumbria for 0- to 18-year-old children **with hospital admissions being minimal.**

3.6 Summary

3.6.1 We started this section by asking two basic questions**: is water fluoridation in Cumbria doing any good? Is it needed?**

Is water fluoridation in Cumbria doing any good?
Using both historical and more recent children's dental health data for Cumbria, the answer to this question is **NO**. For nearly 40 years, children's dental health in Cumbria has progressively improved **without water fluoridation making any incremental difference.** Dental decay rates are currently low (0.8 dmft) and consistent with the national average. Hospital admissions for dental caries (tooth extractions) are amongst the lowest in the country.

3.6.2 Is it needed?

The available data would suggest that there has been **no benefit from water fluoridation** for nearly 40 years compared with other preventative measures. It is therefore highly improbable, given the low underlying level of dental caries, that there will be any future benefits. To make a significant financial investment to continue water fluoridation in Cumbria makes neither economic nor dental health sense.

3.6.3 Cumbria County Council is currently paying over £120,000 per year (which is twice the national average cost per head of population) for water fluoridation **for no benefit** – money which could be better used on other oral health improvement programmes. Furthermore, local taxpayers may want to question why a commitment has already been made to install fluoridating equipment in Williamsgate Water Treatment Works (page 47 of the Report) **without knowing if there are any benefits from the current scheme.**

4. ORAL HEALTH BENEFITS

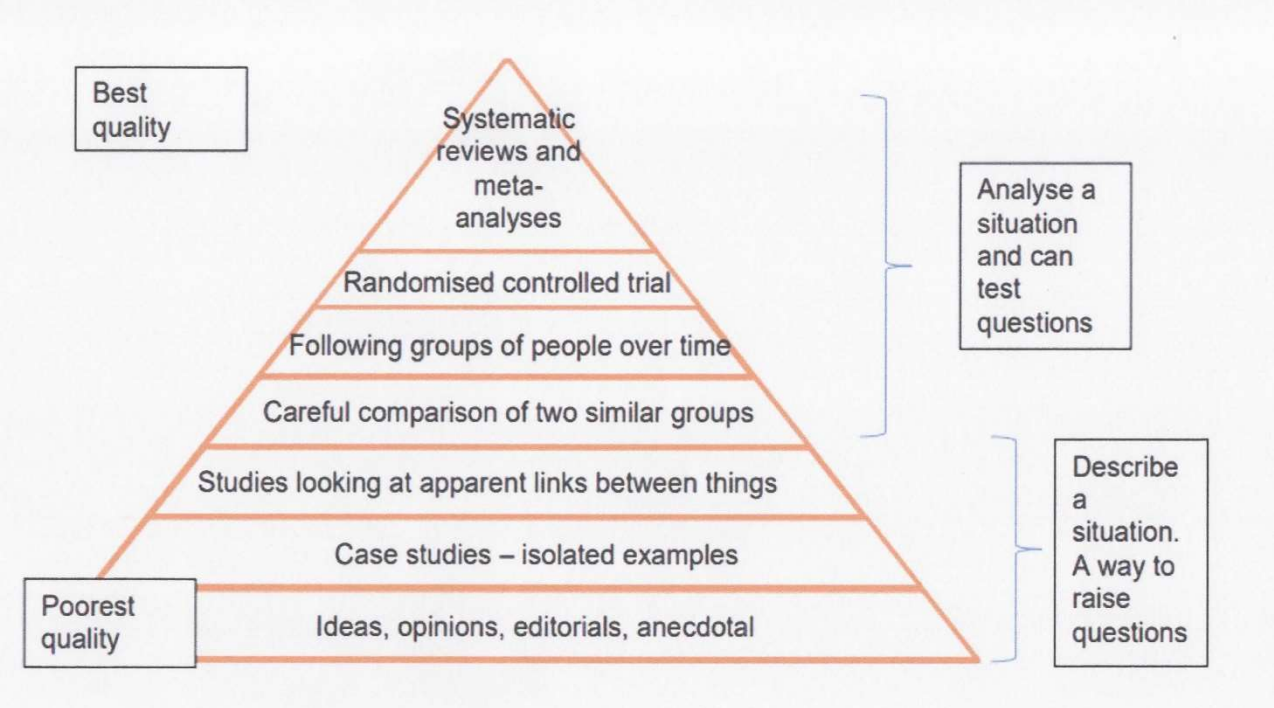
4.1 There are references in the Report to the *"……known oral health benefits of water fluoridation…."* (e.g., Page 47 of the Report) and during the presentation of the Report to the SMB, Councillor Stephen Haraldsen made reference to *"….. oral (dental) health benefits outweighing other considerations….".* Since these "benefits" are fundamental to both the continuation of the current water fluoridation scheme in Cumbria and the possible extension of it, clarity is needed on: -

- The evidence source of the "benefits"
- The relevance to Cumbria

4.2 The evidence source of the "benefits" of water fluoridation

4.2.1 It is difficult for the layperson to comprehend **how good is the evidence** being presented on the "benefits" of water fluoridation. Is it the best quality, or is it from a more questionable source? Generally speaking, "evidence" from dental and public health professionals invariably carries more credibility because of their status – more a case of who says what; rather than what is said. But proper scrutiny must explore beyond this veneer and establish what is good science and what is propaganda dressed as science.

4.2.2 On Page 242 of the Report the well-known "pyramid of scientific evidence" is reproduced and is repeated below for convenience. At the very top of the pyramid (the best quality) is the Systematic Review with the quality gradually reducing (to poor quality) through a further six layers.



PYRAMID OF SCIENTIFIC EVIDENCE

4.2.3 The most recent Systematic Review in this country is the so-called "Cochrane Review" [5] in 2015. Cochrane found: -

- Fluoridation led to around a **15% increase in children with no decay in their teeth**. [my emphasis] While confident about this finding in children 40-plus years ago when the majority of studies were conducted, they could not be certain about the extent, if any, to which this change in the percentage of children affected holds true today.
- Very little contemporary (i.e., up-to-date) evidence, a high risk of bias within 97% of the studies admitted, and questionable applicability of fluoridation to modern life where fluoridated toothpaste is common, dietary patterns are different, and caries incidence is much lower.
- Insufficient evidence around any effect of fluoridation on adults, or around disparities in caries across socio-economic groups (dental health inequalities).
- There was an association between fluoride level and dental fluorosis: at a level of 1 part per million, fluorosis may be found in up to 47% of a population and in an unsightly form in up to 15%.
- Reviewers did not address other questions about harm or safety, or ethical or environmental arguments.

4.2.4 The findings from the Cochrane Review reflect similar findings from the York Systematic Review [6] 15 years earlier. The dearth of good quality scientific evidence on the "benefits" of water fluoridation has been known for over 20 years. The only known scientific study in the last 20 years which might strengthen this evidence base is the CATFISH project which **was dismissed as irrelevant** by the Task and Finish Group (see paragraph 3.2).

4.2.5 Using the best available evidence, a 15% increase in children with no decay is hardly ***"significant"*** and when the caveats (40-plus years old data; high risk of bias; applicability to modern life) are taken into account, it further reduces the credibility of the claim for *"……significant dental health benefits"* (Page 68 of the Report). So, where is the evidence coming from which promoters of water fluoridation are claiming to show the *"unquestionable oral health benefits of water fluoridation"*?

4.2.6 To answer this question it is necessary to refer to the statement issued by the Chief Medical Officers on 23 September, 2021 [7] the relevant extract from which is reproduced below for convenience: -

"If all 5-year-olds with drinking water with less than 0.2 mg/l fluoride instead received at least 0.7mg/l from a fluoridation scheme, then the number experiencing caries would be lower. The decline would be 17% in the least deprived areas, rising to 28% in the most deprived, and the number of hospital admissions for tooth extractions in children and young people is estimated to reduce by 45 to 68%."

4.2.7 This is typical of the "evidence" being used by promoters of fluoridation to convey the oral health benefits. It is being widely used by the Public Health Community, dental health professionals (e.g., Page 235 of the Report) and is even in briefing material for MP's.

4.2.8 The source of the "evidence" has been traced to start from the 2018 Health Monitoring Report [8] which is four layers down (*"studies looking at apparent links between things"*) on the "pyramid of scientific evidence" from the Systematic Review – i.e., of much poorer quality. The Health Monitoring Report contains the following caveat: -

*"Therefore, this report alone **does not allow conclusions to be drawn regarding any causative or protective role of fluoride**; similarly, the absence of any associations does not provide definitive evidence for a lack of a relationship".* [my emphasis]

4.2.9 The information in the Health Monitoring Report on the oral health benefits of water fluoridation uses data from the National Health Service (NHS) Dental Epidemiology Programme for England [2]. This latter source of data contains **no reference to, or information on, water fluoridation status** and thus further reduces the quality standard.

4.2.10 To produce the "evidence" being proffered by the Chief Medical Officers et al, Public Health England (PHE) took dental health data from the NHS Dental Epidemiology Programme and **statistically manipulated** it to produce the so-called "evidence". It is **not** actual evidence from a scientific study, or direct evidence from an epidemiological survey. It is a theoretical statistical calculation.

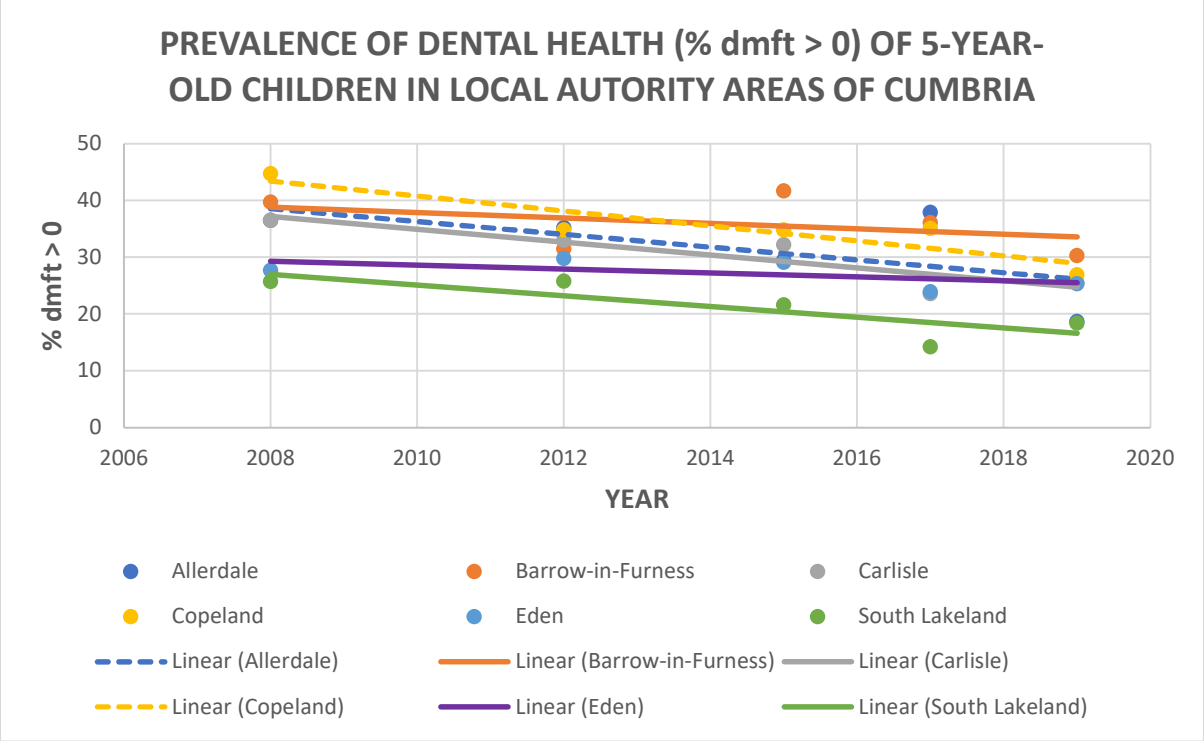
4.2.11 If there is any doubt that this is the case then one only has to look at the wording of the Chief Medical Officers statement: ***"If** (all 5-year-olds with……)*; *"…number experiencing caries **would be** lower"*; *"The decline **would be** 17% in the least deprived…."*; *"…..and young people **is estimated** to reduce by 45 to 68%."*

4.2.12 It is left to the reader to decide which evidence on the oral health benefits of water fluoridation is more substantive – that from the Systematic Review of **actual** scientific studies or that **manipulated** from a theoretical statistical exercise.

4.3 The relevance to Cumbria

4.3.1 Historical and current data on the oral health status of children in Cumbria has already been presented in Section 3 and clearly shows there **has been no benefit from water fluoridation** on the "severity" of dental health. There is another measure of oral health status, namely, **"prevalence"** - % of 5-year-old children with experience of decay (% dmft > 0).

4.3.2 Data extracted from NHS Surveys [2] are presented in the table in paragraph 3.4.2 for each of the six lower tier local authorities in Cumbria for five annual periods from 2008 to 2019 and are plotted in graphical form below: -



4.3.3 The rate of reduction (the slope of the line) in the prevalence of dental decay is very similar for the fluoridated areas (Allerdale and Copeland) and the unfluoridated areas indicating that these improvements are **unconnected to water fluoridation.** This is yet further evidence that there is no oral health benefit from water fluoridation scheme in Cumbria.

4.4 Summary

4.4.1 There are references in the Report to the *"……known oral health benefits of water fluoridation…."* and to *"…. oral (dental) health benefits outweighing other considerations…."* although no attempt was made to either review or assess the current situation in Cumbria.

4.4.2 This short review of the evidence base exposes that good quality scientific evidence is either non-existent or weak to substantiate these claims, so recourse is made to the statistical manipulation of poor-quality data from surveys. Caveats and disclaimers in this source data are ignored and the quality of the evidence being used is not made clear to the reader. These claimed benefits are **not based on good scientific evidence.**

4.4.3 When oral health improvement data are examined specific to Cumbria there is a clear indication that there is no beneficial effect from water fluoridation over and above existing oral health measures. **The "known" oral health benefits from water fluoridation in Cumbria are NEGLIBLE.**

4.4.4 Against this background, the wisdom of considering *"…..oral (dental) health benefits outweighing other considerations…."* is questionable and could lead to the potentially damaging downplaying or disregarding of the harmful effects of water fluoridation.

5. FLUORIDE NEUROTOXICITY

5.1 This is probably the most fundamental question pertaining to the current fluoridation debate. Since 2017 there have been important findings from very high-quality, US government funded studies which indicate that fluoride – at the exposure levels found in fluoridated communities – can impact the brain in various ways.

5.2 One Councillor (Neil Hughes) went so far as to suggest that it *"……would be **foolish and reckless** to ignore the evidence……"*. So why then were the presentations from two eminent professors (Witness Session 1) ignored?

5.3 The answers given by a dental professional (Dr Yvonne Dailey) in the Report and Councillor Stephen Haraldsen during the debate can be summarised as: -

- Correlation is not causation
- Questionable quality of the evidence

5.4 In the former case, the "basics" of epidemiological studies appear not to have been understood. **No epidemiological study EVER proved causality**. For example, smoking is associated with lung cancer and although the direct causal mechanism has never been established, there are few, if any, medical scientists who do not consider it to be causal. Indeed, it is generally accepted that smoking causes lung cancer. It is all to do with **weight of evidence**.

5.5 In the latter case, prior to 2017, the 60 or so fluoride / IQ studies from China, Iran and Mexico were always dismissed by the pro-fluoride lobby as being 'weak' studies - despite most of them pointing in the same direction - i.e., harm. That changed in 2017 with the "Bashash Study" (and other, good quality, studies presented in Witness Session 1) which are of significantly better quality, being rigorous and difficult to dismiss on methodology. The **quality** of these latest studies is from level 3 of the ""pyramid of scientific evidence" (see Paragraph 4.2.1).

5.6 For the chairman of the Task and Finish Group (Councillor Stephen Haraldsen) to advise members of the SMB that *"……the quality of the evidence* [on fluorides neurotoxicity] *did not match the quality of evidence of benefits….."* is **erroneous, misleading and potentially dangerous.**

5.7 To repeat, the quality of these latest fluoride neurotoxicity studies is from level 3 of the ""pyramid of scientific evidence". The quality of evidence on general water fluoridation benefits are taken from a subset (i.e., a lower level) from level 5 of the ""pyramid of scientific evidence" (see paragraph 4.2) and local to Cumbria data shows t**he "known" oral health benefits from water fluoridation in Cumbria are NEGLIBLE** (paragraph 4.4.3).

5.8 That there is *"….no **convincing*** [my emphasis] *evidence of neurological effects at fluoride concentrations achieved by fluoridation of water supplies"* (statement by Dr Yvonne Dailey on page 70 of the Report) is a **subjective view.** "Convincing" is in the eyes of the beholder – it is highly unlikely that promoters of water fluoridation would accept **any** evidence which might undermine their long-held beliefs.

5.9 The SMB could have taken a more balanced view, but chose not to, or, indeed, exercise the "Precautionary Principle". Asking that *"…. the evidence is kept under review…."* (Recommendation 3 on page 48 of the Report) is a cop-out.

5.10 The weight of evidence is now irrefutable. Ignoring it, as the SMB is currently doing, is considered *"…. foolish and reckless…."*. It presents potential dangers to some members of the public. The local authority is **failing in its duty of care to advise pregnant women not to consume tap water, nor to make infant formula with it.**

6. COST EFFECTIVENESS OF WATER FLUORIDATION COMPARED WITH ALTERNATIVES

6.1 Evaluating the cost effectiveness of water fluoridation **compared with other alternative oral health improvement programmes** seems to have fallen through the cracks of the Task and Finish Group. It has not been possible to find any reference in the Report to the cost effectiveness of alternative oral health improvement programmes.

6.2 There is little reference per se to the cost effectiveness of water fluoridation except for these comments on page 47 of the Report: -

> *"Members noted the debate and 'both sides of the coin'. Members noted that the distinction between capital and revenue costs needs to be clarified up front".*

6.3 *"Members noted the debate ……"* is something of a misnomer since only three members of the Task and Finish Group attended Witness Session 1 (which is when the fundamental flaws in the Public Health England *"Return on Investment Tool"* were exposed) and **not one single question was asked**. "Noting" and **understanding** could well be two distinctly different things.

6.4 "Understanding" is further questionable in the sentence *"Members noted that the distinction between capital and revenue costs needs to be clarified up front".* What exactly needs to be clarified? There is a clear distinction between the definition of what are capital costs and what are revenue costs. What is **unclear** is how much of **each** Cumbria County Council are paying every year to the Department of Health and Social Care for their water fluoridation scheme. The local authority has been paying the "bills" for years without, seemingly, knowing what it is paying for. Costs have increased by a factor of **more than 10 times** in the past 8 years. Why is Cumbria County Council currently paying **twice as much** as the national average per head of population for its water fluoridation?

6.5 The Task and Finish Group were supposed to investigate *"The cost effectiveness of the fluoridation of water supplies compared to alternatives".* **They didn't.** No comparisons to other *"alternatives"* were made; had they been, then the Group would have found that water fluoridation is the **least cost effective** of a number of oral health improvement programmes (as outlined in the briefing paper provided **before** Witness Session 1).

7. PUBLIC CONSULTATION

7.1 A member of the Scrutiny Management Board (Councillor Philip Dew) specifically asked the question *"will public consultation be needed for the 'new' scheme from Williamsgate"?* The response from the chairman of the Task and Finish Group (Councillor Stephen Haraldsen) was, to paraphrase: *"It is NOT a 'new' scheme; it is a* ***continuation of an existing scheme****; therefore, public consultation is not needed".* This is **wrong and misleading.**

7.2 Under current legislation [9, 10] there is no such thing as a *"continuation of an existing scheme".* Water fluoridation schemes can only be **"new", "varied"** or **"terminated"** and whichever one is chosen, **a public consultation is needed.**

7.3 Since the Director of Public Health has confirmed, in writing, that the scheme emanating from Williamsgate WTW will be a "variation" (of an existing scheme) then this should trigger the statutory process for getting the "variation" approved, which includes public consultation. So, for the first time in the 50-year history of water fluoridation in Cumbria, the public should be consulted.

7.4 The statutory process for seeking approval of the "variation" is for the local authority to submit a proposal to the Secretary of State (SoS) for Health and Social Care showing the scheme is operable and efficient. If the SoS agrees, permission is granted to proceed to the next stage of public consultation. Based on the results of the public consultation, and following a request from the local authority, the SoS could then give the go-ahead for the scheme.

7.5 Given this somewhat convoluted and expensive process (the public consultation in Southampton in 2008 is thought to have cost £880,000), with no certainty over the outcome, it is surprising that the commitment has **already been made** to install the fluoridating equipment into the Williamsgate WTW *"…. as the capital works at the Williamsgate treatment plant were met by central government"* (Page 47 of the Report).

7.6 This apparent dysfunctional approach to following the proper statutory process does a great disservice to the public of Cumbria.

8. LEGAL STATUS OF FLUORIDATED WATER

8.1 On page 46 of the Report to the Scrutiny Management Board (SMB) is the following statement: -

"Conclusions
• Legal status of water fluoridation: Members were assured that fluoridation is not classified as a medicine under UK legislation"
During the presentation of the Report to the SMB on 24 November 2021, Councillor Stephen Haraldsen stated *"the legal position on water fluoridation is very clear – it is not a medicine"*

8.2 **Both statements appear wrong**. A distinction needs to be made between **water fluoridation** (sometimes shortened to fluoridation) – the **PROCESS** of adding fluoride compounds to the water supply – and **fluoridated water** the **PRODUCT** resulting from water fluoridation. In the former case there is no argument on water fluoridation's legal status – it is covered by the Water Industry Act 1991. It is the **product** of fluoridated water which is contentious.

8.3 It is inappropriate to state what fluoridated water **isn't** (a "medicine"), there must be clarity on **what it is**. In simple terms, ingestible products – of which fluoridated water is one – can be classified as foods, medicines, or poisons.

8.4 Fluoridated water is not classified as a "food" because it contains a substance (the fluoridating compounds of hexafluorosilicic acid H_2SiF_6 or disodium hexafluorosilicate Na_2SiF_6) which is not permitted in foods by the Food Standard Agency (FSA).

8.5 If fluoridated water is not classified as a "medicine" then **it is unlawful** to make medicinal claims (e.g., reducing dental caries) for a product which does not have a marketing authorisation (licence issued by the Medical and Healthcare Products Regulatory Agency – MHRA).

8.6 "Assurances" given to members may not be much consolation if the legal status of water fluoridation is challenged and they become potentially liable to prosecution. Water companies are indemnified against legal action; Public Health England have distanced themselves from offering legal advice [11] Page 11; which leaves local authorities fully exposed to potential criminal and civil litigation. It is therefore surprising that Cumbria County Council is prepared to rely on "assurances" rather than seeking the necessary independent legal advice.

8.7 Fluoridated water could conceivably be considered a poison because the fluoridating compounds contain hydrofluoric acid, which is a recordable poison (Deregulation Act 2015, Schedule 21, Part 4), and traces of arsenic (BSEN 12175:2013, pp. 7-8). The deliberate addition of these poisons to the public water supply defies logic

9. MEDICAL ETHICS AND PATIENT CONSENT

9.1 A member of the Scrutiny Management Board (Councillor Philip Dew) during the debate of the Draft Report raised concerns over the ethical issues surrounding water fluoridation. In particular, the need for patient consent to receive a form of medication.

9.2 The response from the chairman of the Task and Finish Group, Councillor Stephen Haraldsen was (paraphrased) *"Fluoridated water is NOT a medicine; so, we are NOT medicating, so consent is not needed"*. This is a **preposterous notion and fundamentally wrong.**

9.3 The medicinal nature of fluoridated water is much debated. Adding fluoride to the water supply is intended to treat the **individual** – not the water. Once added, it is very difficult to avoid ingesting it. This then becomes a **medical intervention** and raises the question of **medical ethics** where an individual has a right to decide what treatments – and what risks – he or she will accept.

9.4 Under the principle of **informed consent**, anyone can refuse treatment with a drug or other intervention. The European Convention on Human Rights and Biomedicine 1997 [12] states that health interventions can only be carried out after free and informed consent. The General Medical Council's guidance on consent [13] also stresses patients' autonomy and their right to decide whether or not to undergo medical intervention even if refusal may result in harm.

9.5 This is especially important for water fluoridation. Water is essential to everyone. We drink it in one form or another, cook and prepare food with it. Fluoridation is not intended to provide a controlled dosage of fluoride. Those who drink one litre of water with 1ppm (part per million) fluoride, swallow exactly one milligram of fluoride. But different people drink different volumes of water. So, whereas the **concentration** of the fluoride in the water can be specified and controlled, the **dosage** of fluoride to any individual is uncontrolled.

9.6 This would inevitably lead to an uncontrollable dose of fluoride being given for up to a lifetime to people whose medical histories are not known, regardless of the risk of dental caries. As a medical intervention without a right to choose, water fluoridation would for a large percentage of those affected (perhaps the majority) be unnecessary. Many people don't need it. And for a significant percentage of those affected, be undesired. Many people don't want it.

9.7 This fundamental right of an individual to refuse medical treatment should not be compromised by considerations of the "common good" – especially when **those who may choose to use fluoride can get it from sources other than our water supply.**

10. REVIEW OF RECOMMENDATIONS

10.1 As a reminder, the Task and Finish Group were asked ***"To investigate the benefits and risks of fluoridation of water supplies to inform future decision-making in respect of fluoridation in Cumbria"***. Their "Recommendations" and the accompanying "Rationale" are reproduced below and appropriate comment made.

Recommendation 1

That when making a decision, the decision maker should factor in the known oral health benefits of water fluoridation and that they should make their assessment based on the current balance of scientific research on the wider health risks, if the question were to arise in the future. Therefore, currently, Members recommend that existing water fluoridation schemes in Cumbria should be maintained and that consideration should be given to extending water fluoridation.

Rationale

That the above recommendation reflects the view of the Members based on the overall balance of benefits and risks to dental health and other health conditions. That there are no additional capital costs incurred in the maintenance of existing schemes.

10.2 There seems to be a lack of clarity of what is ***future decision-making*** (*"…. if the question were to arise in the future"*); ***the existing fluoridation scheme*** (*"…. recommend that existing water fluoridation schemes in Cumbria should be maintained"*) and ***capital costs*** (*"…. there are no additional capital costs incurred in the maintenance of existing schemes"*).

10.3 The *"existing fluoridation scheme"* **ceases** when Ennerdale WTW and Cornhow WTW are taken off-line and replaced by the new Williamsgate WTW. The *"existing schemes"* are not being *"maintained"* they are being **"varied"** which requires the local authority to go through the full rigours of the relevant statutory procedure. Decision-making is not some time in the *"future"* it is **NOW** if continuation of supply (of fluoridated water) is desired.

10.4 *"Incurring no additional capital costs"* is financial naivety. Of course, "additional capital costs" will be incurred – the water supplier (United Utilities) is unlikely to voluntarily foot the bill for installing the new fluoridating equipment into the Williamsgate WTW. Public Health England (or its successor) will pay the capital costs but **these will be recovered from the local authority**, as is currently being done in recovering the capital costs of refurbishing the fluoridating equipment at Cornhow and Ennerdale WTW's.

10.5 Perhaps the biggest failing in this recommendation is expecting the decision-makers to take account of the *"evidence of benefits and risks"* when the SMB has apparently **failed to do so.**

10.6 **Scrutiny** is supposed to take a thorough and independent assessment of the evidence. **It did neither.** It failed to take into account available local data which clearly shows water fluoridation is having no beneficial effect in Cumbria. It failed to take an

unbiased and independent assessment of the scientific evidence it reviewed. The best quality evidence (from Systematic Reviews) was ignored; there has never been a single randomised controlled trial in the history of fluoridation; and evidence of harm (development neurotoxicity) from good quality studies was glossed-over.

10.7 Instead the evidence for benefits and harms was taken predominantly from low level analyses of hospital statistics (Health Monitoring Reports). While such reports may identify any increase in dental fluorosis (a visible indication of systemic toxicity [14]) any more serious side-effects would be difficult to detect because of all the potential confounders [15]

10.8 To suggest *"that consideration should be given to extending water fluoridation"* is mis-conceived and ill-informed. Proper scrutiny of the existing scheme has not been adequately completed; there is no evidence that the current scheme is doing any good (local evidence points to the contrary) and there is financial naivety surrounding the cost effectiveness of the current scheme. It makes no economic or dental health sense to extend fluoridation in Cumbria.

10.9 *Recommendation 2*

That fluoridation works best as part of a package of interventions to improve oral health, and that decision makers should not view water fluoridation in isolation from other topical fluoride application methods and behavioural interventions for better oral health and diet.

Rationale

Members were convinced that schemes which rely on fluoridation alone are insufficient, that the national evidence shows they can reduce dental caries, but that diet, health advice and targeted programmes offering topical fluoride will be necessary in Cumbria to maximise reductions in preventable dental disease. Members also noted, however, that during the early phase of the COVID pandemic these other schemes stopped, while fluoridation would have continued. The PHE Local Authority Toolkit suggests that under the current legal framework this is something Health and Well Being Boards can consider as part of their duty to conduct a Joint Strategic Needs Assessment

10.10 Where is the evidence to show *"that fluoridation works best as part of a package of interventions to improve oral health"*? All the local evidence from Cumbria shows the opposite – there is no incremental beneficial effect from water fluoridation (see sections 3 and 4) and it is a waste of money.

10.11 The *rationale* that water fluoridation continued during the early phase of the COVID pandemic and other schemes stopped is obscure and inappropriate. It would not make any difference to dental health status in Cumbria for a period of a few weeks or months. A situation which is well known in Cumbria from water fluoridation ceasing for 6 years during which time dental health continued to improve.

10.12. *Recommendation 3*

That decision makers recognise that the science on wider health risks is constantly changing, and that the evidence of the wider health implications of fluoridation are kept under review.
Rationale

The UK Chief Medical Advisors' statement published 23 September 2021 reflects the current state of scientific knowledge on the benefits and risks of water fluoridation. Members felt that they heard no evidence that convinced them to form a different overall opinion, though they heard evidence which demonstrated effects of fluoridation on health, and that future research could challenge the current majority consensus. PHE and its successor the UK Health Security Agenda (UKHSA) is required to produce a four-yearly report on the health risks of water fluoridation. The next report is due out in 2022 and Cabinet are recommended to receive an update of the scientific health evidence alongside this report when it is published.

10.13 The *recommendation* is sound but the *rationale* is flawed. The *UK Chief Medical **Advisors'*** [my emphasis] did not publish a statement – it was the UK Chief Medical **Officers'**, and it fell well short of *"reflecting the current state of scientific knowledge".*

10.14 The Chief Medical Officers' statement was based on a 2018 Health Monitoring Report and **completely ignored** the latest good quality studies on the neurotoxicity of fluoride. By their very nature, the Health Monitoring Reports are unlikely to find any adverse health effects from water fluoridation (see section 5 and paragraph 10.7 above).

10.15 For a local authority, with its duty of care, to ignore the latest scientific evidence on fluoride neurotoxicity and fail to warn pregnant mothers and bottle-fed infants of the dangers from using fluoridated water, **borders on the reckless**.

10.16 Public Health England's (PHE) successor is not *"the UK Health Security **Agenda**"* [my emphasis] but the UK Health Security **Agency** and the Office for Health Improvement and Disparities (OHID). It is this latter organisation (OHID) which will take over responsibility for water fluoridation.

PHE do not currently produce *"a four-yearly report on the **health risks** of water fluoridation"* [my emphasis] – they produce a health **monitoring** report. Why anyone with a public health responsibility would want these poor-quality health monitoring reports to take precedent over good quality scientific studies beggars belief.

11. SUMMARY AND CONCLUSIONS

11.1 We started this response by highlighting that the Report (produced by the Task and Finish Group) and the subsequent debate of it, and acceptance of it, by the Scrutiny Management Board, had several shortcomings, misleading statements and factual inaccuracies. The shortcomings are: -

- A **failure** to take account of the dental health status of children in Cumbria
- A **failure** to take account of any oral health benefits specific to the current water fluoridation scheme in Cumbria
- A **failure** in its duty of care to advise pregnant women not to consume fluoridated tap water or to make infant formula with it
- A **failure** to investigate the cost effectiveness of the fluoridation of water supplies compared to alternatives

11.2 These **failings** were compounded by **misleading statements**: -

- **Misled** over the need for public consultation
- **Misled** over the legal status of fluoridated water
- **Misled** over the ethical issues of water fluoridation

11.3 Factual inaccuracies persist throughout the Report and the Recommendations are ill-founded and inappropriate.

11.4 Water fluoridation is a complex and controversial subject. It is a public health measure which is currently affecting around 120,000 people in Cumbria. Scrutiny of such a measure is not for the faint-hearted nor a subject which can be glossed over. Impartiality and thoroughness are crucial. The work of the Task and Finish Group and its Report fall well short of these expectations.

11.5 Impartiality is compromised by the inequity in attendance and questioning at Witness Sessions and the treatment of evidence. No account was taken of the **quality** of the evidence being reviewed and an apparent political bias permeated the acceptance of information presented by dental and public health professionals. Heavy reliance was placed on a re-statement of old positions rather than an independent assessment of new, good quality, scientific evidence.

11.6 Lack of thoroughness is evident in the failings and misleading statements identified above in paragraphs 11.1 and 11.2.

11.7 In conclusion, the aim of the scrutiny review was “to provide valuable additional information”. **It provided little of value and little of addition which would be helpful in informing future policy.**

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