

## **SAGE v6.2 Draft Report**

### **Comments from Mike O'Carroll 2-4-07**

These comments are based on those I made to the version 6 and 6.1 reports, taking account of the latest amendments in v. 6.2. Some old comments are satisfied or reduced. Some new comments are added. It will be for me to capture or give pointers to any remaining dissenting comments in my 250 words. I have not achieved access to or checked the latest versions of the Supporting Papers, so my detailed concerns remain as previously communicated. As there is no executive summary with v. 6.2, my earlier comments on it are set aside. If there is to be an executive summary, they may re-emerge.

Comments are again classified:

Class 1 = fundamental, warranting a dissenting note;

Class 2A = significant, worth pressing without a dissenting note;

Class 2B = significant, worth doing at moderate effort;

Class 3 = minor, e.g. typing, low-cost corrections.

Class 3 points have at this stage been dropped, though there are a few new ones.

Responses to my suggested amendments to v.6.1:

Class 1: 3 adopted, 7 rejected.

Class 2A: 5 adopted, 8 rejected.

Class 2B: 0 adopted, 4 rejected.

Here "adopted" means in part or whole. I am grateful for the response.

#### Page 8 third para

Comment: I share the unease in the Government Comments to v.6.1. It is hardly relevant for the purposes of this assessment whether there has been progress in stakeholder relations, and there is some evidence of deterioration over the last nine months. We have not conducted nor commissioned an assessment of stakeholder relations, so have no formal evidence for making such assertions. Informal feedback from meetings is not the same thing as a measure of stakeholder relations. One reason for avoiding such claims is that they may give the distracting and off-putting appearance of self congratulation.

Amendment: Delete the paragraph "The state of relations ...".

Class: 2B

#### Page 15 para3 (first box under Views within SAGE ...)

Amendment: Add "and some remain non-aligned" after "view of the science".

Class: 2B

#### Page 15 para4

Comment: "primary" begs the question of what sense of primary, and blurs the WHO/HPA view almost into the California view (which also would accept CL primary in causation terms, if not in numbers of cases). Really the WHO/HPA view is exclusive in treating childhood leukaemia as the only outcome to take into account.

Amendment: replace "primary" by "only". After all, that's what this view stands for!

Class: 2A

#### Page 18 section 1.4 after para1.

Comment: Again, the first two paragraphs run well. However they still dodge the question (and interesting

general problem) of independence of advisory bodies. I will still ask for the extra paragraph, but reduce the grade of this comment from 1 to 2A.

Amendment: insert new paragraph:

“Independence of review bodies can be difficult to define and achieve, and conflicts of interest difficult to avoid. For example the recent Wegman Report, relating to global warming, analyses connections of core reviewers through joint authorship and refereeing each other’s work. Its first recommendation was “... *authors of policy-related documents ... should not be the same people as those that constructed the academic papers*”.

Class: 2A

Page 20 para 6

Comment: “a leading example” is unjustified by any evidence base or assessment procedure, and looks (sounds) like unnecessary trumpet blowing.

Amendment: Replace “a leading example” by “an example”.

Class: 2B

Page 21 section 1.5 para 1

Comment: The second half of the paragraph could give an unfortunate impression of a “closed book” with respect to ongoing considerations. We even identify ongoing issues later on, so we can hardly express disappointment should a significant perspective emerge. Indeed, here is one: the HPA estimate of 2 annual attributable CL cases is based on the minimalist threshold assumption (which SAGE has also used). It is unsatisfactory that we use an extreme assumption when linear-no-threshold or some other progressive relation can be argued and considered, which could increase the attributable cases per year from 2 to around 60. I am not arguing for the other extreme, but for showing wider awareness instead of taking the HPA extreme as “gospel”. That is just one example; the whole subject is open to review and changing scope of evidence, as, in my view, the ultra-conservative positions like HPA’s have remained relatively unchallenged until recently, as exemplified by the dose-response assumption. However, reflecting the spirit of the sentence, we feel we have done some useful work, so something might be said, but we should avoid being overly protective about our work.

Amendment: delete from “we will be disappointed” to the end of the paragraph, and replace by “however, we are aware of areas of further work, though these tend to be very specific or additional to the work already done.”

Class: 2A

Page 21 para before box

Comment: I share the unease in the Government Comments to v.6.1, again on the theme of being overly protective towards our work. The sentence “We reached conclusions, and because we believe those conclusions are soundly based we have an expectation that government will take them seriously” remains gratuitous, despite the change of words, and tends to detract from the credibility of the report.

Amendment: Delete the sentence. Delete “But” from the following sentence.

Class: 2B

Page 21 (box)

Comment: the concern in the previous comments applies again here with the last sentence in the box. We should not be protective of our work and perhaps should not incline to prejudice an RIA. The sentence looks like a nod and a wink that it’s cut and dried, the RIA should use the same assumptions (including the dismissive extreme but scientifically flawed HPA attributable cases) and reach the same conclusions as SAGE has. They probably will! But it is poor analysis.

Amendment: delete the second sentence in the box.

Class: 1

Page 22 bullet points

Comment: concern as above.

Amendment: add bullet “alternatives to the assumption of a threshold dose-response relation in which there is no risk right up to 0.39  $\mu$ T, which could raise the corresponding extreme low estimate of only 2 attributable cases of childhood leukaemia per year to about 60”.

Class: 1

Page 23 para 2 last sentence (“In Section 5 ...”)

Comment: redundant after dropping the lists of names aligned.

Amendment: Delete the sentence.

Class: 2B

Page 23 second bullet

Comment: inappropriate value-laden emphasis.

Amendment: delete “even” from “even higher fields”.

Class: 2B

Page 24 para1

Comment: We adopted the assumption originally in a spirit of what-if testing in order to get started. It now is in danger of being put forward as a prescription for a following government RIA, which I do not think is appropriate.

Amendment: add to para1 : “We note however that, in cost-benefit analysis, this assumption would correspond to a much lower number of attributable cases than would alternative assumptions of a progressive dose-response relation.”

Class: 1

Page 24 after para2 of “Other adverse health effects”

Comment: this assumes the requested paper S21 will not be included. I am not campaigning for Maureen’s survey specifically, but I am calling for a better acknowledgement of the appropriate consideration of non-peer-reviewed evidence.

Amendment: insert new paragraph after the one beginning “The other adverse effects ...” and before the third paragraph:

“There is also informal and anecdotal evidence relating to other adverse health effects. The IEGMP report “Mobile Phones and Health”, 2000, recommended (1.71) that “*in a rapidly emerging field such as mobile phone technology where there is little peer-reviewed evidence to base advice, the totality of the information available, including non-peer-reviewed data and anecdotal evidence, be taken into account when advice is proffered*”. There is much more peer-reviewed research on ELF EMFs than there was in 2000 on mobile phones, but it is still uncertain. However, there is little peer-reviewed research on minor illnesses such as headaches and insomnia, although they are often mentioned anecdotally. We mention non-peer-reviewed evidence here, although we have not sought a comprehensive view of it.”

Class: 1

Page 34 end of section 2.7

Comment: there are vital omissions. The suggested new paragraph is carried forward from my v6 comments with the addition of the words “in the view of some stakeholders”. The addition of words “some stakeholders strongly disagree with the WHO approach” is inappropriate and hides the material matters identified in the

suggested amendment.

Amendment: Insert:

“This last presumption, in respect of health outcomes other than childhood leukaemia, is particularly sensitive and has emerged very recently in a context of published evidence-based allegations of serious conflict of interest. Further, in the view of some stakeholders, the presumption seems to overlook two material aspects. First, the other health outcomes are generally much more prevalent than childhood leukaemia, and so would imply much greater potential impact, which may reasonably warrant further investigation. Second, WHO appears not to have considered well-defined or compound hypotheses, and is perhaps unwittingly promoting an exclusive hypothesis to the effect that EMFs may be a causal risk factor for childhood leukaemia alone and for no other outcome, regardless of potential common mechanisms.”

Class: 1

Page 38 box, last bullet and page 41, box, second bullet

Comment: Taking account of HPA comment to v6.1.

Recommendation: Replace “HPA should produce information” to “Information should be provided”.

Class: 2B

Chapter 5:

Page 43 last para line3

Comment: “ruled out ... undergrounding” is still misleading, though I welcome the addition in parentheses. We were considering only 275/400 kV lines and NG data at the time. This should be recorded in the report.

Amendment: change the sentence to “An example of an option that we ruled out in the dominance analysis is undergrounding 275 and 400 kV lines as a general policy on health grounds alone.” And further insert “at these voltages” in the next sentence between “undergrounding” and “scores”.

Class: 1

Page 44 second para

Comment: Taking account of HPA comment to v6.1.

Recommendation: Replace “We assessed these options in four situations” by “We identified four situations but focused attention principally on the first two”.

Class: 2B

Page 44 section 5.3

Comment: We are still portraying two minor afterthoughts, which did not emerge from the dominance analysis process, as if they were substantive recommended options. These are not options in our process terms and should not be presented as such. This gives a false impression of making substantive recommendations when we are not; it is over-dressing these minor recommendations.

Amendment: Change the title of this section to “5.3 Basic advice”. Then replace the first paragraph by “Our analysis leads us to give agreed basic advice on three points:

- provision of public information;
- optimal relative phasing for double-circuit overhead lines;
- government decision on seeking significant exposure avoidance.

The first two points are clear basic advice for low-cost measures which however have limited impact on reducing public exposure to EMFs. They did not emerge as options through our process, but were only added after the best option could not be supported by all stakeholders. The third is advice to government to decide, quickly, on whether to take further measures, potentially with moderate cost, to achieve some significant exposure avoidance, as set out in section 5.4.”

Then continue with the next paragraph “Firstly, we recommend ...” as before.

Class: 1

Page 44 box

Comment: Taking account of HPA comment to v6.1.

Recommendation: Delete “We consider that HPA ...guidance, but” from the last sentence.

Class: 2B

Page 45 title 5.4 etc.

Comment: this option is about avoiding future exposure, not reducing existing exposure. It would be wrong to dress it up as exposure reduction, particularly when some stakeholders are acutely aware that it does nothing for existing exposed situations.

Amendment: in the title, change “obtaining significant field reduction” to “avoiding significant new future exposure”. Also change the opening clause below the title to “To avoid significant new future exposures,” and likewise on page 47 line 2, on page 50 para1 (box) of 5.5, and elsewhere as word search reveals.

Class: 2A

Page 46 right hand column

Comment: “likely legal challenges by developers” appears three times in the table, including in the “best available option”. Surely that is a fatal flaw? Why are we identifying a best available option with such a flaw? Have we justified “likely” or is it a non-professional opinion?

Amendment: change “likely” to “possible”, unless we have a professional legal opinion supporting “likely”, in which case we should say so.

Class: 2A

Page 49 last sentence before “Consequences of this option”.

Comment: I share the unease in the Government Comments to v.6.1. It would be one thing to formulate a recommendation that government acts, another to indicate an expectation.

Amendment: Delete “and we consider ... as a whole”.

Class: 2B

Page 50 third bullet

Comment: The cost-per-home figures have leapt up and down in the latest report drafts from £20-80k to £20-400k, and now to £20k to £160k, without clear explanation, which is perhaps a sign of our uncertainty and the need for further careful work. My earlier suggestion, which was argued in detail at some length, was for a range £12k to £50k. The higher range is presented in the draft as if it were firm, but we know it is very uncertain.

Amendment: change £20k-160k to “in the broad region of £10k to 100k”. Revise S19 accordingly.

Class: 2B

Page 50, conclusion box

Comment: Last sentence “urging” government seems inappropriate and detracts from the report.

Amendment: Delete last sentence “We urge ...”.

Class 2B.

Page 51 bullet1

Comment: Although there is more work to do on variants, there has been some interest in finding a lower-cost variant such as applying the corridor only to future land designations or future lines.

Amendments: Add “or some variant of it” to bullet 1.

Class: 2B

Page 51 last para and page 52 first para across the page

Comment: The additional text previously with the non-aligned paragraph needs restoring and extending. The term “alternative advice” (last para page 51) slightly misses the point for the non-aligned view, which does not see “either - or” advice. If there are to be alternatives, then the third (non-aligned) alternative should be equally identified. More importantly, Government is not obliged to adopt either one or the other of the polarised views. Rather, it can make a balanced decision taking account of both.

Amendment: Relocate the first para across page 52 (“Other stakeholders ... both.”) to the bottom of page 51, and add to it: “Some would argue that the gross imprecision intrinsic in much of this work invalidates a firm adherence strictly to one view or the other. Their advice to government would be that the evidence we have considered can provide a reasonable and defensible justification for favouring or for not favouring the best available option, depending on other political factors which SAGE has not considered.”.

Class: 2A

Page 52 box and last three paras

Comment: It is somewhat unsatisfactory to leave existing exposures in this way. We didn’t finish considering them and have identified the area for further work.

The paragraph before the box somewhat misrepresents what we did, which was this: we focused on new developments as our place to start considering options, expecting existing exposures to be more difficult and more expensive. It was our expectation, not our analysis, which led us to start there. We never adequately returned to address existing exposures.

Some options may be simple (but limited), for example a cost-limited phased programme of burying sections of powerlines on a priority basis giving the most cost-effective exposure reduction. We just didn’t get around to considering it seriously.

Amendment1: Replace the sentence “Our analysis clearly showed ...” by “We prioritised work on options to avoid creating new exposures and did not complete our work on existing situations”.

Amendment 2. In box, change “would be more complex” to “could be more complex”.

Amendment 3. Replace the last sentence on the page (“We propose ...” by “We have identified the issue of reducing existing exposures, perhaps on a priority basis in a cost-limited phased programme, as an area for further work, and hope to make further recommendations in the future.”

Class: 1

MJOC 2-4-07