

## E-MAILS REPORT LAUNCH – NOTES FOR MR INTRODUCTION

1. Good morning – good to see you all here again. A lot has happened since February! I hope you have enjoyed reading the fruits of our labours.
2. Thanks first to Fiona Fox and her team for hosting us this morning.
3. Perhaps I should begin by recapping on who we are. Biographical notes are in Appendix 1.
  - I am Muir Russell, and before my retirement last autumn I was the VC at the University of Glasgow, and before that the Permanent Secretary to the Scottish Executive.
  - Jim Norton brings experience as a senior manager and adviser in the fields of information policy and IT security, including roles advising Parliament through POST
  - Geoffrey Boulton was Regius Professor of Geology at the University of Edinburgh with a research background in the fields of glaciology, glacial geology, Quaternary science and energy.
  - Peter Clarke is Professor of Physics at the University of Edinburgh. He was until recently Director of the National eScience Centre, and is now working at CERN.
  - David Eyton, who is abroad and cannot be with us today, is Group Head of Research and Technology at BP. He sits on the UK Energy Technologies Institute Board and the ScienceBusiness Innovation Board.
4. I want to thank the Team for putting a huge amount of effort into our evidence gathering, analysis and report writing. This is a substantial product, and I hope you will have seen that it addresses the issues with care, on the basis of sound evidence.
5. I want to begin with a few words about the way we approached the task.
  - First, this was not about forming a view on the content or quality of the scientific work and the conclusions drawn by CRU. Let me explain that. We looked at processes and procedures, and how data was handled, but not at how the results should be interpreted in scientific terms.
  - Our job was to look at the behaviour of the CRU scientists. We examined their honesty, rigour and openness in relation to the allegations made

against them. Under the word honesty a particular concern would be about setting out to arrive at a predetermined outcome, or suppressing contrary views, and we were also concerned with the frankness of communication.

- We did not set out to perform a close textual analysis on the e-mails, parsing every sentence and looking every word up in the dictionary. That would have taken forever – some would have been happy that it should – but it would have got us nowhere, not least because they do not all point in the same direction. We have not sought to explore what some of the widely quoted phrases mean, either in substance or intent. Instead we used our reading of the e-mails and our understanding of the issues they raised for those engaged in the climate debate to try to get at the key allegations about the behaviour of the CRU scientists.
  - And we sought to test those allegations with objective evidence so far as possible. So we didn't go for a courtroom style of inquiry, with oral testimony and cross examination. Instead we gave critics the chance to make detailed submissions setting out their challenge to the CRU scientists, and we gave CRU the chance to answer by pointing to objective evidence that wanted to bring forward. Because ultimately this has to be about what they did, not what they said.
6. And the results are there for all to see and judge in our report and on our website.
  7. We wanted to give a sense of perspective. So we used the approach set out in para 10
    - On handling global temperature data, we went to global primary sources and tested how data was handled.
    - On tree-ring temperature reconstructions, we looked at the overall picture painted in Chapter 6 of the Fourth Assessment Report of the IPCC in 2007 (AR4) and examined the influence of CRU.
    - On peer review, we sought independent input (from the Editor of *The Lancet*) on how the system works, to provide a context for our judgement.
    - On influencing the IPCC process, we sought advice from the Review editors on the role individual contributors can play.

8. I believe this has given authority to our conclusions, and should stop in their tracks those who have made up their minds that this is a whitewash, without waiting to see what we have done.
9. So what have we concluded?
10. Climate science is a matter of such global importance, that the highest standards of honesty, rigour and openness are needed in its conduct. On the specific allegations made against the behaviour of CRU scientists, **we find that their rigour and honesty as scientists are not in doubt.**
11. In addition, we do not find that their behaviour has prejudiced the balance of advice given to policy makers. In particular, **we did not find any evidence of behaviour that might undermine the conclusions of the IPCC assessments.** I'll come back to the question of the public interest in openness.
12. **But we do find that there has been a consistent pattern of failing to display the proper degree of openness,** both on the part of the CRU scientists and on the part of the UEA, who failed to recognise not only the significance of statutory requirements but also the risk to the reputation of the University and, indeed, to the credibility of UK climate science.
13. Let's look at the detail to explain why we reached those conclusions.
14. First, about the temperature series, there was the allegation that CRU must have something to hide and so their work could in some way not be trusted, because they were withholding concealing or manipulating data. So what we did was to get hold of the data from publicly accessible sources ourselves and analyse it, without any reference at all to CRU, to see whether one could produce the sort of results they had been producing. This was a simple trial analysis. And we got essentially the same shapes of graph, as you'll see in the report. We concluded that whether or not you use data with or without the modifications or adjustments CRU used, and even if you select just sub-

sections of the data, the outcome is robust. How that outcome is interpreted is, of course, a proper matter for scientific debate. So we conclude that the argument that CRU had something to hide does not stand up. What our work also suggests is that anyone who wants to can do their own analysis. The data is publicly available and the code is easy to write – so testing alternative hypotheses is not difficult.

15. Secondly, there were allegations that the work on tree rings, reconstructing temperature proxy records, also proceeded on the basis of selection of data, in order to produce a predetermined outcome. There is of course a lot of proper scientific debate about what conclusions can be drawn from tree rings, and with what uncertainty. But looking at CRU's publications we do not see any **evidence** that they were actively selecting tree series to produce a predetermined outcome. And our key high level point here is that when you look at how the CRU work fed in to the overall judgement about climate history made on the basis of Figure 6.10 in Chapter 6 of the relevant IPCC report, you find that it did not invalidate the overall picture painted. So we do not find that the question marks placed by the allegations over the CRU scientists' input make the IPCC report judgement misleading. We have some comments to make on the expression of uncertainty in relation to that judgement where we feel that the approach taken by IPCC was an improvement on earlier reports.

16. These are the parts of our report that provide the basis for our conclusion that the honesty and rigour of CRU as scientists are not in doubt, and that we have not found any evidence of behaviour that might undermine the IPCC processes and hence call into question the conclusions of the IPCC assessments in this area.

17. Let me now turn to the allegations about peer review. There was a lot of concern, for example on the part of the Commons Committee on S&T that we should address these issues fully. You will find in the report a paper written by Richard Horton of the Lancet with comments from Liz Wager, Chair of COPE. This

critique of peer review helps set in context the allegations made about the behaviour of CRU scientists in response to contested papers. As you will see, we analysed the specific allegations made, and find that the sort of robust positions CRU scientists took were typical of the debate that can go on during peer review. Peer review is indispensable, but some myths about peer review need to be addressed. We believe that this work will make a significant contribution to wider understanding and debate on peer review. Richard Horton is here, and will be prepared to deal with any questions you have when this press conference is over.

18. The fourth set of allegations related to the part CRU played in the drafting of Chapters 3 and 6 of the IPCC Report. We had a lot of evidence here, on both sides of the argument. But what is clear to us - and we went to the Review Editors to verify this - is that Professors Jones and Briffa were part of teams of authors and were not in a position individually to determine the final wording and content on the chapters.

19. I move on now to the question of the degree of openness in the CRU's behaviour. We have significant criticisms to make here.

20. First, on the withholding of data, there seems no doubt that CRU got themselves into a position that they were unhelpful in response to legitimate requests, and there are plenty of references to anxiety about what critics would use the data for. We address very directly the question of compliance with the FoIA, where we find evidence of unhelpfulness in responding to requests, and we make a number of recommendations about the way in which UEA should respond to this. In particular, there needs to be engagement right up to senior management supporting the proper handling of information requests, and recognition in the risk management process of the potential for damage to the University's reputation.

21. Secondly, we found that CRU should not have withheld station identifiers - by which I mean a set of information identifying the set of stations used - so that their work could be precisely replicated.
  
22. Third, although we do not find that CRU withheld certain tree data – they took steps to pass on the request to the data holders – they should have ensured that the data was archived in a more timely way, in the interest of transparency.
  
23. Fourth, we looked at the much mentioned “hide the decline” e-mail. The WMO figure acquired iconic significance, and we find that it was misleading. We do not find that it is misleading to curtail reconstructions at some point *per se*, or to splice data, but we believe that both of these procedures should have been made plain – ideally in the figure but certainly clearly described in either the caption or the text.
  
24. Finally, let me stand back a little from the immediate issues of concern and comment on some wider questions that working on the Review has raised for me and my colleagues. They are touched on in the last two pages of the Executive summary.
  
25. First, how is science to be conducted in a new world of openness, accountability and indeed what I might term citizen involvement in public interest science? There need to be new ways of making results and data available, and we mention some aspects of current thought. There need to be ways of handling criticism and challenge, of responding to a range of different sorts of criticism and getting into a more productive relationship with critics than we have sometimes seen in this case.

26. The science community – and I include university managers in this – need to have in the forefront of their minds the importance of the credibility of the knowledge base they are generating and of not losing public trust in it. Their risk management in the widest sense needs to recognize this
27. At the same time, science needs to find ways of expressing the uncertainties that inevitably attend its findings, and mean that so much of what it does is in a sense “work in progress”. More needs to be done to allow policy makers and the public to understand and work within this uncertainty.
28. We identify the need for some sort of “public space” where these issues can be aired, in an atmosphere that is at the same time unthreatening and properly challenging. If the Review has contributed to advancing discussion of these issues it will be a useful contribution in addition to addressing the questions in our remit. [2203 words]