

**NATIONAL TECHNICAL ADVISORY GROUP ON FLOODING ISSUES  
SUSTAINABLE FLOOD MANAGEMENT SUB-GROUP**

**Minutes of the meeting held on 20 February 2004, Victoria Quay, Edinburgh.**

**Present:** Alan Burdekin (Scottish Executive, (SE) Environment Group, Air, Climate and Engineering Division – chair),

Scottish Executive: William Walker (Environment Group, Air, Climate and Engineering Division – minutes), Debi Garft (Environment Group, Air, Climate and Engineering Division), Gillian Hood (Environment Group, Water Environment Division).

David Howell (Scottish Natural Heritage), Mike Donaghy (Environment LINK), John Greaves (COSLA), Prof. Alan Werritty (University of Dundee), David Wilson (Scottish Water), Prof. Charles Ainger (Chartered Institution of Water and Environmental Management), David Harley (Scottish Environment Protection Agency (SEPA)).

**Apologies:** Jonathan Chapman (Environment Agency).

**Agenda item 2: Welcomes**

1. Alan Burdekin (AB) welcomed everyone to the meeting and thanked them for their time.

**Agenda item 3: Sub-Group remit – paper NTAG2004(2)**

2. Bar one slight revision, Members endorsed the Sub-Group remit.

**Action point 1: Secretariat to amend paragraph 5 (bullet point 2) to include drafting a set of principles to accompany a definition of sustainable flood management (SFM).**

**3. Agenda item 4: Consider existing definitions/guidance relating to sustainable flood management**

4. David Wilson (DW) suggested that a definition of SFM should be based on two levels. Firstly, he proposed the need for a high level, strategic definition to set a context. Secondly, he suggested a more guided definition for taking forward flood prevention schemes.

**DEFRA Guidance on Sustainability – NTAG2004(9)**

5. David Howell (DH) said he was surprised that there is so little emphasis on the social and economic aspects of flood risk management in DEFRA's sustainability guidance. In particular there are no references to what the public wants. This view was echoed by the group. Charles Ainger (CA) commented that many important issues appear to have been overlooked. He added that the definition is based on a more detailed, second-end approach. AB proposed that a definition for SFM be worked up from scratch. He added that social aspects will be covered by the scheme appraisal process.

6. Mike Donaghy's (MD) asked what drivers lie behind devising a definition of SFM. AB stated that from an SE perspective, defining SFM will allow flood risk management to be addressed in strict accordance with the Flood Prevention (Scotland) Act 1961. Alan Werritty (AW) commented that the repositioning of the insurance industry with regard the acceptance of risk, is an issue which requires consideration under the auspices of SFM. CA then added that human/social needs cannot be ignored. Finally, Gillian Hood (GH) stated that consultations with "responsible authorities" under the Water Environment and Water Services (Scotland) Act 2003 are imminent. GH will be writing a discussion paper for these meetings and a clear and workable definition from the Sub-Group would be useful at these meetings.

7. John Greaves (JG) stressed that the guidelines this Sub-Group agrees must be able to practically connect with any definition and people must be able to assess whether they are being sustainable. CA acknowledged this point, proposing that a third detailed level advising on implementation may be useful. AB explained that this stage would be covered by the new guidance. David Harley (DHa) cautioned against making the process more bureaucratic.

8. AB remarked that there were very few pieces of research on the social aspects of flooding and related costs. CA highlighted the Lewes (Sussex) study which looked at social aspects of flooding and validated the need for social costs to be included in the cost/benefit process. JG noted that taking account of the social impacts of flooding in assessments increases the cost/benefit ratio achieved. AB accepted that past schemes have invariably been reactive and whilst the evaluation of social issues were not included, this was allowed by accepting lower financial returns.

9. AW commented that if there is a need to prioritise schemes in the future then social aspects will become an issue for cost/benefit analysis. DH suggested that a proactive approach should be one of the principles attached to considering flood prevention schemes. MD asked if we had the necessary quality of data to adopt a proactive strategy. AB commented that when available the second generation flood risk map will be helpful. Members accepted that advances were being made in this area.

10. AB explained that the SE is about to put out a tender for research into the potential for catchments to deal naturally with floods. CA agreed on the logic behind this approach, and stated that it would need to consider widely dispersed catchments for comparative purposes. AW added that as well as looking at topography for potential storage the research would need to look at current and future patterns of land use. He explained that this would be more problematic as dynamics have a role to play here. MD explained that the Drumnadrochit land-use project will look at these issues. It aims to get all stakeholders together to look at how they can change their land-use practices to help alleviate problems of run-off in the area. He concluded that taking land-use into consideration would tie in well with ICE's Learning to Live with Rivers publication, and COSLA's Flooding Task Group report. Both these reports heavily emphasise the role the environment can play in a sustainable approach to addressing flood risk. AW reminded Members that in the "big flood" natural solutions alone would not prevent large scale flooding. This was borne out in Perth in 1993 when flooding exceeded the river's natural flood plain.

## WWF Definition

11. MD informed Members that WWF's definition of SFM will be published in the near future and explained that naturally it would promote natural environmental solutions. He also explained that it would give examples of flood management techniques. MD also acceded that hard engineering practices do have a place in flood risk management, but only as a last resort.

12. AW commented that whilst natural solutions do have a place in flood risk management, for extreme flood events, say occurring 1 in every 100 years, there is a need for a greater dependency on hard engineering solutions. CA suggested that '1 in 100' may not be the correct benchmark to us since local authorities may not be able to fund a scheme to protect against a 1:100 flood. We must therefore take account of the ability of communities to tolerate and recover from flood events when coming to a decision about the level of protection required. MD reminded Members that it would also help if we stopped building in flood risk areas. DW confirmed that many local authorities do not currently run flood simulation events.

13. DW commented that after a flood event the relevant bodies did not get together to share experiences and learn from the event. He proposed that this should happen in future.

14. CA proposed that a whole-life approach to flood cost analysis be adopted and tailored to incorporate variables such as capital defence costs, environmental costs, social costs etc. He added that while social tolerance to flooding is a variable that should not be ignored, any solution must be feasible from a practical perspective.

15. AB commented that a flood tolerance approach to flood risk assessment might not satisfy the insurance industry because the industry does not generally provide cover if flood risk is greater than 1:75. AW said that he believed that the Association of British Insurers (ABI) would welcome a real costing of flood events. AB proposed that the Guidance Sub-Group should further consider the real cost of a flood.

16. MD raised the subject of culpability, advocating for the introduction of an accountability index for decisions taken in the past and in the future. JG stressed that many decisions of yesteryear were taken in good faith, but also recognised that the polluter paying is an idea worth considering.

## Others

17. CA presented a series of slides summarising fundamental sustainability principles concentrating on 4 outcomes: Social; Environmental; Economic; and Future generations. (The slides are attached at Annex 1). He added that it would be helpful if our principles and definition dove-tailed with SE's general stance on sustainability. Of particular note, CA commented that the insurance industry should be encouraged to play a more proactive role by informing people what they can do to protect their properties. DH raised the issue of whether thinking is revolving around flood prevention per se, or rather around flood damage, noting that this difference could influence the subsequent thought process.

**Agenda item 5: Consider how best to encourage and facilitate a more integrated approach to sewer/urban flood management.**

18. DW circulated four papers for Members to consider before setting out the proposals he considered relevant to addressing the unique issue of flood management in urban areas. Firstly, he called for improved reporting of flooding incidents by local authorities and suggested setting up a database of all flooding incidents in urban areas. AB explained that the SE feels there is a need to pull together the local authority biennial reports on flooding and perhaps hold a conference to report the findings. DW acknowledged that this would be helpful as long as it covers sewer flooding as well as river flooding. DW called for NTAG to recommend that there should be joint reporting on sewer and river flooding in future to help provide a more integrated, holistic approach to the factors that can contribute to urban floods. Finally, DW explained that both Glasgow City Council and Scottish Water feel that it would be beneficial if the SE could recognise the need to identify flood path maps. He suggested that NTAG might consider a joint project on this issue with an industrial collaborator.

**Action point 2: Sub-Group to recommend that NTAG endorse the preparation of a compilation of biennial reports covering both river and coastal, and also sewer flooding.**

**Agenda item 8: “Systems Dynamics” approach to help develop a workable definition of SFM**

19. CA introduced the concept of “Systems Dynamics” to the group (see slides at Annex 2), and lead a discussion on how it might be applied to flood risk management. In response to a query from MD, CA explained that as opposed to being utilised as a tool to aid in the search for solutions, the technique is used to theoretically assess how viable ideas/proposals will be in practice. Nonetheless, he stressed that the group should not rely too heavily on this approach – rather Members were urged to view the technique as an informative aside into how more feasible, better integrated, outcomes can be reached.

20. CA explained that he knew of an MPhil student who is currently available to help develop a systems dynamics approach to flood risk management. This could help validate the practical feasibility of an SFM definition put forward by the Sub-Group. The project would run for 4 months and the SE would be asked to meet nominal travel and accommodation expenses. Members agreed to recommend this approach to NTAG at the next meeting.

21. MD commented that a holistic systems dynamics approach will require a number of input assumptions to be made e.g. The E.U. Water Framework Directive which has, as yet, not been fully implemented. Communicating the outputs of this work was also briefly addressed – CA suggested that parables, metaphors etc may be the most effective way of informing the layman on what systems dynamics work means in practice.

**Action point 3: CA to provide group with systems dynamics action proposal for recommendation to NTAG.**

**Agenda item 7: Consider how “sustainability” in a flood management context might be measured.**

22. Members agreed that it is important to know where the SE is with regard to existing indicators for evaluating sustainable development. Once a definition and principles for SFM are agreed, Members can start to select and assess the suitability of existing indicators first.

23. CA informed Members of a recent “Observer” newspaper article about indicators that concerned generic tests for assessing the success of projects.

**Action point 4: Secretariat to make available existing indicators adopted by the SE for measuring sustainability to Members.**

**Action point 5: CA to forward details of the newspaper article for Secretariat to distribute to Members.**

**Agenda item 9: Draft a pragmatic definition of Sustainable Flood Management along with a set of principles for practitioners to apply.**

24. Members agreed that the common threads/thinking behind a definition had been captured during the meeting. Members decided that the Secretariat should draft a definition based on outcome their discussions and distribute for comment. Members were invited to submit drafts of particular concepts for inclusion. CA’s notes on fundamental principles of sustainability will also be made available to Members.

**Action point 6: SE to draft and distribute a definition of Sustainable Flood Management stemming from Sub-Group discussions, together with CA slides on fundamental sustainability principles.**

**Agenda item 11: Any other business**

25. DH informed Members that plans are starting to be made for SNH’s Sharing Good Practise seminar on 17 June, and extended an invitation for them to attend a meeting (week beginning 15 March) to discuss programme arrangements, speakers etc. David also made known that should Members be unable to attend, ideas and opinions would nonetheless be very useful.

26. Thursday 22 April was provisionally agreed as a suitable date for the second meeting of the SFM Sub-Group.

**Action point 7: Secretariat to confirm date of next meeting.**

**NTAG Secretariat  
March 2004**