

NATIONAL TECHNICAL ADVISORY GROUP ON FLOODING ISSUES

REPORT OF 17 JUNE SEMINAR: ‘WHAT IS SUSTAINABLE FLOOD MANAGEMENT?’

Purpose

1. This paper summarises the aim, contents and outcomes of the one-day meeting hosted by SNH on 17 June, on behalf of the NTAG Sustainable Flood Management sub-group, to explore the question ‘What is Sustainable Flood Management?’.

Background

2. SNH runs an annual programme of one-day events entitled ‘Sharing Good Practice’, in which practitioners in a particular specialist field, related to the natural heritage, are invited to share expertise and experience. SNH offered to use one of the dates in the 2004 programme to explore the concept of sustainable flood management. NTAG agreed to this suggestion, and the event was held at the SNH Conference Centre at Battleby (north of Perth) on 17 June (see programme and delegate list attached at Annex A).

3. This paper provides a number of outputs from the day. A few general observations, with some participants’ overall feedback on the day, are provided in paras. 4-7 below. Second, participants’ comments from workshop sessions in the morning (Annex B) and afternoon (Annex C). Finally, the main open discussion sessions and the chairman’s conclusions are summarised in note form (Annex D). Paras. 8 & 9 below consider how NTAG might use the outcomes from the seminar, and para. 10 below seeks NTAG’s agreement to a number of actions.

General observations on the day

4. The aim of the day was to provide the information and surroundings for participants to use their own experience, and information presented by case study speakers, to provide an early test of the emerging NTAG draft principles of sustainable flood management. With this aim in mind, particular thought had gone into:

- structure and content of the programme – balancing presentations, open discussion, and structured discussion, with case studies to focus comments on realities, not idealised solutions;
- an auditorium seating plan to encourage informality and interaction;
- balanced spread of backgrounds around the tables in the auditorium, and in the workshop groups, both to break up ‘cliques’ and spread expertise;
- chair, speakers and facilitators were carefully briefed.

5. The day was well-supported, and participants appreciated the opportunity to contribute to NTAG’s work, and were encouraged to see the Executive ‘listening’. There was plenty of interest in, and support for the NTAG process of producing a definition, objectives and principles of sustainable flood management, supported by detailed technical guidance and assessed by performance indicators. Evaluation forms were completed by 30 delegates (>50%), and were overwhelmingly positive, as the extracts below indicate:

“Liked the idea of contributing to NTAG’s consultation”

“Good to have opportunity to input to NTAG”

“Much clearer understanding of NTAG work and issues under consideration”

“Useful to present the NTAG definitions”

“Increased familiarity with the Scot Exec approach”

“Improved understanding of flooding issues from LA point of view”

“Provided a great opportunity to find out about SFM from engineers/LAs”

“Excellent exchanges with professionals from different backgrounds, stimulating lateral thinking”

“ Well-balanced between presentations and break-out groups”

“Group discussions provided a valuable way of identifying key issues”

“Perhaps a little too focused on flood prevention schemes and not enough on planning, avoidance, etc”

“Perhaps too much on local authority-orientated flood issues”

“Event would have benefited from presentations by developers but not sure how you could persuade them to come along”

“Perhaps the Executive could learn from SNH’s Sharing Good Practice organisation/interactive programme”

“Have a series of workshops for greater impact”

6. Contributions and exchanges were almost always constructive, vigorous at times, and participation was enthusiastic and well-informed. Informal conversations over lunch suggested that a future event on the same topic would be welcomed. However, some important sectors were under-represented on the day, notably local communities, particularly those who have suffered flooding, landowners, insurers and developers. If the NTAG principles are to be widely appreciated, more effort will be needed to tap into the networks these groups use.

7. There are several comments, from all stages of the workshop, which suggest that NTAG should recognise three issues not well covered in the draft material presented to the seminar:

- Is the strategy to be pro-active, or continue to be re-active?
- Who has responsibility, and must lead?
- Will we treat coastal flooding with the same priorities as river flooding?

Using the outcomes: Sustainable Flood Management sub-group discussion

8. At its meeting on 29 July the Sustainable Flood Management sub-group had an initial discussion about the main outcomes of the seminar. This covered:

- the need to identify which comments from the seminar would require changes to the draft NTAG material presented at the seminar, and to show how these had been considered in re-drafting;
- the importance of the ‘plain English’ message – who are the main audience?
- the need for consistency of message with the other NTAG sub-groups;
- debate about the main target readership for the NTAG draft definition, objectives and principles. In particular, is it just for those in local authorities proposing schemes under the 1961 Act, or is it wider, involving the planning and other functions of local authorities, as well as Scottish Water, SEPA, SNH, and other functions of Ministers – as the ‘responsible authorities’ approach in S2 of the WEWS Act suggests?

Next steps

9. Further work is needed to:

- ensure that messages are consistent with the emerging outputs of the other sub-groups (NTAG advice is needed on this);
- clarify the intended audience, bearing in mind differing views within the sub-group;
- modify the definition/objectives & principles in light of reactions from 17 June event;
- develop some early thoughts on indicators;
- consider further early consultation with under-represented groups: communities, landowners, developers, insurers;
- discuss at a final sub-group meeting on 26 August, with a view to agreeing final draft definition, objectives and principles of sustainable flood management, plus some possible performance/measurement indicators, for NTAG on 23 September; and

Charles Ainger will present some ideas (as slides) to aid NTAG's 5 August discussion of 'next steps'.

Conclusion

10. **NTAG is asked to:**

- **note and discuss the main findings of the 17 June seminar, and preliminary reactions (paras 4-8 above; Annexes B-D);**
- **approve the dissemination of the summary material in Annexes B-D direct to seminar participants;**
- **consider if any further specific feedback, from so far under-represented groups, is needed before submitting final draft material to NTAG on 23 September (and agree any action required);**
- **agree the main NTAG/sub-group outputs (including intended audiences for these outputs, and links between them) required by the Executive for its 23 September meeting; and**
- **endorse the further sub-group work proposed at para. 9 above to produce outputs for the NTAG meeting on 23 September.**

**NTAG Sustainable Flood Management sub-group
August 2004**

ANNEX A: PROGRAMME AND LIST OF DELEGATES

**Sharing Good Practice, Battleby, Thursday 17 June 2004
'What is Sustainable Flood Management?'**

- 0930** Registration & coffee
- 1000** Welcome & introduction
(Chair: John Thomson, Director of Operations & Strategy (West), SNH)
- 1005** Experience in sustainable flood management from outside Scotland
(Martin Janes: UK River Restoration Centre)
- 1020** Small group discussions 'in situ' – priorities for tackling flood risk in Scotland
- 1030** Principles of Sustainable Flood Management
(David Howell, Scottish Executive's National Technical Advisory Group on Flooding)
- 1055** Discussion, including comparison of priorities and principles
- 1115** Coffee break
- 1145** Scottish Case Studies
- Experience with Perth's flood defences
(Adam Olejnik, Perth & Kinross Council)
 - Proposed Elgin Flood Defence Scheme
(Steven Trewelha, Moray Flood Alleviation Group)
 - Glasgow Strategic Drainage Plan
(George Morrison, Glasgow City Council)
 - Addressing flood risk in Glen Urquhart
(Kim Leech, 'SAFER' Project)
- 1245** Lunch break
- 1345** Introduction to workshops
- 1350** Comparing principles and practice (5 parallel workshops)
Participants will be invited to apply their practical experience to the proposed principles of sustainable flood management. Four workshops will discuss the Scottish case studies. The fifth will consider the national picture, experience from other schemes, etc. The event organisers will assign participants to workshops to ensure a good spread of expertise in each.
- 1450** Prepare feedback
- 1500** Feedback and discussion
- 1550** Conclusions & next steps (Chairman)
- 1600** End – tea available

Delegate list (afternoon workshop groups)

Group 1: Experience with Perth's flood defences:

Expert (Speaker): Adam Olejnik (NTAG member)

Facilitator: Alan Werritty (NTAG member)

John Riddell	Consultant (NTAG member)
Linda Mathieson	Aberdeenshire Council
Derek Davidson	Angus Council Roads Dept
Andrea Johnstonova	RSPB, Scotland
Janet Khan	SNH
Gordon Roger	Clackmannanshire Council
Neil Redgate	NDR (Environmental Services)
Barbara Barbarita	Scottish Water
Joanne Lambert	SEPA

Group 2: Proposed Elgin Flood Defence Scheme

Expert (Speaker): Steven Trewelha

Facilitator: Charles Ainger, MWH (NTAG member)

Gavin Leishman	Atkins Water
Hamish MacPhee	Falkirk Council
John Ireland	Forestry Commission Scotland
Susana Veitch	Perth & Kinross Council
Jennifer Heatley	SNH
Marc Becker	SEPA
Bessie Barron	Shetland Islands Council
Claudia Carter	The Macaulay Institute

Group 3: Glasgow Strategic Drainage Plan

Expert (Speaker): George Morrison

Facilitator: Karen Wright, SNH

Debbie Garft	The Scottish Executive/NTAG Secretariat
John Shabashaw	SEPA
Isabel Glasgow	Chairwoman, Clyde Waterway
Carolyn Clark	SNH
Carina Oliver	Posford Haskoning
Steve Kinninmonth	Fife Council
Julie Waldron	Edinburgh City Council
Findlay Brown	Falkirk Council

Group 4: Addressing flood risk in Glen Urquhart

Expert (Speaker): Kim Leech

Facilitator: Martin Janes, River Restoration Centre

Louise Bond	SNH
Tamsin Morris	Ythan Project
Geoff Potter	The Highland Council
Watson Bell	River Lossie & District Salmon Fisheries Board
Alistair Godfrey	Perth & Kinross Council
Kenneth Knott	Forestry Commission Scotland
Tricia McGregor	EnviroCentre
David Bassett	jba Consulting
David Harley	SEPA (NTAG sub-group member)

Group 5: The National Picture: NTAG Draft principles

Expert (Speaker): David Howell (NTAG member)

Facilitator: David Wilson, Scottish Water (NTAG member)

Ronnie Falconer	Babtie
David Gray	The Highland Council
Barbara Taylor	Posford Haskoning
Ian Graham	Perth & Kinross Council
Mark Sweeney	MWH
Wendy Kenyon	The Macaulay Institute
George Gray	Angus Council Roads Dept
Ioulia Timochkina	NTAG Researcher
Carolyn Warwick	SNH (NTAG sub-group member)

ANNEX B : PRIORITIES FOR TACKLING FLOOD RISK IN SCOTLAND

Introduction

The UK River Restoration Centre gave an introductory talk about approaches to flood management outside Scotland. This was designed to stimulate ‘free thinking’ amongst participants – to consider what might be possible in Scotland, and what were the main opportunities/constraints. There then followed a short (10-15mins) brainstorm session in which participants were asked to write down their priorities were for tackling flood risk in Scotland. These suggestions are reproduced below, *verbatim* (in quotation marks). For reporting purposes, participants’ comments have been provisionally assigned to what appears to be the most relevant draft NTAG Sustainable Flood Management objective/principle.

NTAG Social Objective

- (a) “Reduce public loss & suffering”

NTAG Principle 1: Sustainability through all stages of project appraisal

- (a) “Incorporate sustainability into CBA of flood schemes”

NTAG Principle 2: Take account of climate change and other uncertainties for future generations

- (a) “Climate change uncertainty (modelling and levels of risk)”

NTAG Principle 3: Promote efficient resource use & sustainable construction methods

- (a) “Experience & appropriate skills are key – need multi-disciplinary skills for integrated approach” (*ie efficient use of human resources*)

NTAG Principle 4: When considering options take whole-life view of costs & benefits

- (a) “Long-term funding schemes needed cf. one-off/short-term fixes”

NTAG Principle 5: Take catchment, floodproofing/abandonment, and do-nothing options to short list

- (a) “NTAG SFM Definition – you will not achieve SFM without taking a catchment-based approach”
- (b) “Appropriate level of protection balanced with flood-proofing”
- (c) “Downstream impacts of schemes – short-sightedness”
- (d) “Topography of many Scottish river systems in Scotland militates against floodplain storage - optimum solutions may involve combination of ‘move it’ and ‘store it’”
- (e) “Artificial separation of legislation/policy/funds for tackling flood risk on agric/non-agric land means whole-catchment options difficult to explore (e.g. via CBA)”
- (f) “Better information on the storage capacity of Scottish floodplains (SPP7 & flood risk maps) in different return period events.”
- (g) Scottish landscape character (fewer significant floodplains; infrastructure packed into valley floors) may restrict floodplain options

NTAG Principle 6: Enhance & conserve biodiversity, avoiding negative impacts

- (a) “Take opportunities for habitat creation”
- (b) “Possible role for agri-environment schemes in compensating farmers for agric. losses arising from flood alleviation measures”
- (c) “Link between natural systems, biodiversity, recreation etc is not always clear to developers”

- (d) “Reinstate channelised rivers back to their natural meander planform”
- (e) “Protection of existing watercourses”
- (f) “What do we restore systems back to?”

NTAG Principle 7: SFM should seek opportunities for economic regeneration

- (a) “Link to urban regeneration projects”

NTAG Principle 8: Resilience, sustainability & cost-effectiveness of natural processes

- (a) “Look for opportunities to open up culverts & reinstate natural watercourses as part of flood alleviation schemes”
- (b) “Channelisation & land drainage have increased flood risk”
- (c) “Problems with adopting SUDS – designed but not adopted”
- (d) “Retrofitting (associated improvement of sewerage infrastructure, e.g. diverting storm runoff from CSOs to SUDS)”
- (e) “SUDS maintenance”

NTAG Principle 9: Assess sustainability of flood risk solution

NTAG Principle 10: Transparent process and single source of information

- (a) “Identify areas at risk”
- (b) “Drainage impact assessment – need consistent standard”
- (c) “Reliable maps of flooding needed as a starting point”
- (d) “Lack of information about culverted watercourses”
- (e) “Need to understand exposure of existing property/land; suggest priority list could be an output”

NTAG Principle 11: Develop systems to maximise ‘people power’

- (a) “Community involvement”

NTAG Principle 12: Minimise bureaucracy and design in ‘self-correction’

- (a) “Planning system unable to cope”
- (b) “Review structure plan”
- (c) “Simplify Flood Prevention Order procedure”
- (d) “LA funding for land management precludes innovation”
- (e) “Landowners reluctant to change management”
- (f) “Better financial incentives for landowners to surrender land to flooding”

Several further comments received, repeated several times, suggest that we should refer to three additional key issues – possibly as extra principles:

A pro-active SFM strategy, rather than a re-active one:

- (a) “Flood alleviation schemes in Scotland to date have been reactive – how do we see pre-emptive measures being adopted?”
- (b) “Reactive approach to flooding (public/political/technical panic)”
- (c) “Planning – avoidance of adding to risk on floodplains; stop further building”

Shared responsibility for SFM, and collaborative action required, by all stakeholders, but with clear lead responsibilities for different elements:

- (a) “No unified approach – need more holistic approach”
- (b) “Difficult to get consensus – many organisations involved”

- (c) “Where is the joined-up thinking - nobody plans together!”
- (d) “Institutional inertia & barriers (Executive/SEPA/LA/Scottish Water) are biggest obstacle to overcome”
- (e) “River management responsibilities uncertain under current legislation”
- (f) “Identify sustainable solutions through partnership working”
- (g) “Scottish Water role in surface drainage – always clear & consistent?”
- (h) “SEPA, Councils, Scottish Water, Scottish Executive all SUDS role”
- (i) “How can ongoing maintenance be arranged between various organisations?”
- (j) “Infrastructure: planners/developers (via RBMP?)”

Separate acknowledgement of the way coastal flooding will be approached – with the same prioritisation principles as river flooding? [Would this be implicit if a pro-active policy is adopted?]

- (a) “Where are the ‘functional floodplains’ (SPP7) for coastal flooding?”
- (b) “Coastal flooding appears to be poor relation – Flood Standards (*sic* - Studies?) Handbook no reference to Shetland”
- (c) “Please issue coastal flood risk maps first”

ANNEX C: WORKSHOP (pm)	Group 1 (Perth)	Group 2 (Elgin)	Group 3 (Glasgow)	Group 4 (G'urquhart)	Group 5 (National)
Definition	<ul style="list-style-type: none"> All wording (definition, objectives, principles) needs careful thought given needs to be communicated to Local Authorities and many others Definition should cover broader environmental issues than just 'natural processes' 		<ul style="list-style-type: none"> Economic resilience – complex No mention of maintaining quality landscapes etc... Should be <u>all</u> flooding – taking it further (maybe) than legislation Take out “long term” 	<ul style="list-style-type: none"> Plain English please! 	<ul style="list-style-type: none"> OK as broad statement subject to minor checks
Objectives (General comments)	<ul style="list-style-type: none"> Important to be placed in the context of Executive SD objectives Sustainability is more of a philosophy than a specific set or solutions – clear link to Executive SD approach is essential Heavily skewed towards assessing individual schemes – should also be capable of operating @ wider scales – catchment, Scotland 			<ul style="list-style-type: none"> Is this guidance, legislation, or just ‘hot air’? Need something which reflects stewardship, maintenance duties Responsibility for adoption of these? Research & publication need to be in test criteria? 	<ul style="list-style-type: none"> Focus on integration of planning, & who will lead NTAG definitions etc must be written with wording relevant to practitioners audience (list of stakeholders) in mind Once definition, objectives and principles agreed, key then is <u>application</u> Some missing principles Integrate water policy - more emphasis on catchment planning Need wider Scottish input to EU initiatives on SFM, and progress disseminated ‘Justice’ idea overdone; too ‘politically correct’? Simplify objectives if possible
Social	<ul style="list-style-type: none"> Uninsured, low-income communities (Glasgow, Perth) vulnerable when floods hit Needs to reflect personal distress and losses “mitigate against adverse effects” (can’t eliminate effects entirely) Be sure to reflect cultural heritage and amenity values 				<ul style="list-style-type: none"> Reducing flood risk – protect – is absolute Amenity / Enhancement & educational

<p>Environmental</p>	<ul style="list-style-type: none"> • “Aim to improve the environment for all species and habitats” • Uncomfortable with “not just humans” – need a more +ve expression of human involvement 			<ul style="list-style-type: none"> • Reword – need broader environmental emphasis than just ‘natural processes’ 	<p>Aim for:</p> <ul style="list-style-type: none"> • Enhancement of environment and biodiversity (point of debate) • All species, <u>including</u> humans
<p>Economic</p>	<ul style="list-style-type: none"> • Need a link to ‘Best Value’ concept in local government • ‘whole-life’ not widely understood: “affordable construction, maintenance running and renewal costs”? • Reference to jobs and wealth – might this lead to greater expectations of designing for greater protection (cf. greater tolerance)? Jobs & economic agendas differ 	<ul style="list-style-type: none"> • Cost must include risks 			<ul style="list-style-type: none"> • OK: short concise, but check consistent with other objectives
<p>‘Generational’</p>	<ul style="list-style-type: none"> • Tautological double-reference to future generations • “Live with uncertainty” simpler wording but still a tough concept 				<ul style="list-style-type: none"> • Simplify: ‘balance present and future needs’
<p>Principles (General comments)</p>			<ul style="list-style-type: none"> • Public engagement (cf. just consultation) as part of the process • Multi-functional benefits – part of design process • Include access/safety etc; links to Greenspace Scotland’s work • Guidance needed on responsibilities and liabilities • Constraints on efficiency & sustainability principles – pressure for/risks to surrounding development, political deadlines etc.. 	<ul style="list-style-type: none"> • Ease of delivery?! • Need to mention SPP7 somewhere • Good practice guidance important role 	
<p>(a) Sustainability @ all</p>	<ul style="list-style-type: none"> • Agreed – triggers mitigation 		<ul style="list-style-type: none"> • OK if right people 		<ul style="list-style-type: none"> • OK

stages	options		involved @ the start – guidance or checklist for projects would help this		
(b) Take a long-term view of sustainability – climate change, needs of future generations	<ul style="list-style-type: none"> For 50y or 100y flood? 	<ul style="list-style-type: none"> Designed for 100y flood – what if this is inadequate? Phased implementation may make a scheme affordable but relies on future generations to fund 	<ul style="list-style-type: none"> Lack of data can be a problem, otherwise yes - but must consider short-term too 		<ul style="list-style-type: none"> Add (technology development +land use planning +development change) to climate change example delete “giving them compatible”.....to end consider altering word “met” (e.g. imagined, considered, embraced)
(c) Efficient resource use & sustainable construction methods			<ul style="list-style-type: none"> OK 		<ul style="list-style-type: none"> OK
(d) Whole-life view of costs and benefits	<ul style="list-style-type: none"> Suggests CBA must consider all the way through from installation and maintenance to either renewal, modification or decommissioning Grants issued for schemes need process which transparently assesses quality of proposals cf. NTAG objectives, principles etc 	<ul style="list-style-type: none"> Realistic future maintenance & repair costs important (especially for coastal defences) Appraisal process in Scotland is too weak. Simply focuses on licensing/funding. Assessment needs to take more account of values other than cost 	<ul style="list-style-type: none"> Yes – but money must be made available for revenue funding Important problem measuring intangibles 		<ul style="list-style-type: none"> Layman’s terms needed (e.g. “whole life” – confusing) Add operational / maintenance in some way Clarity on inclusion of environment benefits Much debate – consider another principle
(e) Whole-catchment, property abandonment, floodproofing and do-nothings options to at least short-list stage	<ul style="list-style-type: none"> Catchment perspective essential 	<ul style="list-style-type: none"> Useful to demonstrate that many options/ radical ones have been considered to substantiate decision / transparency 	<ul style="list-style-type: none"> Yes, good practice, but cash flow considerations and sometimes significant investment by councils Need catchment approach to planning –to set policy context for flood management in an area – then consider _each project in catchment context 		<ul style="list-style-type: none"> Clumsy – re-word Alternatives – some difficulty with what to include Catchment Flood Management Plans – need clarity in Scotland re. who does this necessary strategic planning/assessment. NTAG should examine EA document on CFMPs and identify route to parallel approach for Scotland. Complex issues here: NTAG

					revisit principle 5
(f) Enhance & conserve biodiversity; avoid negative impacts	<ul style="list-style-type: none"> This can be done creatively <u>with</u> hard-engineered solutions in some cases 		<ul style="list-style-type: none"> Expand to include geodiversity (landscape, geomorphology) as well as biodiversity etc.. 		<ul style="list-style-type: none"> OK
(g) Economic regeneration	<ul style="list-style-type: none"> May be traded off against environmental damage as a way of justifying expensive, hard-engineered solutions 	<ul style="list-style-type: none"> Opportunity to re-assess floodplain landscape 			<ul style="list-style-type: none"> + Amenity enhancement
(h) Natural processes	<ul style="list-style-type: none"> Flooding is a natural process – it is the associated risk/damage which worries people 				<ul style="list-style-type: none"> “The enhancement of ...” as opposed to “The use of...” Natural processes – wording? Flooding is a natural process
(i) Assess sustainability of solution					<ul style="list-style-type: none"> Criteria for this? Suggest this is ‘downstream’ of principles
(j) Transparency & single source of information to access & learn from	<ul style="list-style-type: none"> Language used is a key aspect of transparency 	<ul style="list-style-type: none"> Who should stakeholders/consultees be? Tension between what authorities feel the public need to know and what public wants to know 			<ul style="list-style-type: none"> Prefer ‘central source’ to ‘single source’
(k) Increase people’s power over their own lives	<ul style="list-style-type: none"> ‘Common Good Fund’ for deprived uninsured households suffering flood damage? 			<ul style="list-style-type: none"> Social acceptance should be part of measurement activities 	<ul style="list-style-type: none"> Make simpler - stakeholder →consult & engage
(l) Reduce bureaucracy and allow for self-correction				<ul style="list-style-type: none"> ‘Yes’ to ‘reduce bureaucracy’ 	<ul style="list-style-type: none"> Suggest alter → focus on learning cf. feedback

ANNEX D: NOTES OF OPEN DISCUSSION & CHAIRMAN'S CONCLUSIONS

(These have been prepared from David Howell's notes taken on the day)

NTAG definition, objectives, principles

Comment (clarification): NTAG hopes that progress towards sustainable flood management can be measured by linking the objectives and principles to real outcomes: the principles could be linked to methodologies, and performance indicators are a next step for NTAG to consider

Q1: Is NTAG considering coastal flooding issues?

A1: Yes, although early in planning this event it was decided to focus on inland issues to keep the day manageable!

Q2: There seems to be an emphasis on responding to flood events after they have happened, but wouldn't a more proactive approach, anticipating & where possible avoiding flooding problems be more sustainable?

A2: Yes – and one of the things NTAG hopes for from today is to get some thoughts on how to move towards more proactive management in Scotland.

Q3: The NTAG process is a very welcome step forward, but how outward-looking is the Executive being, in particular in taking on board the recent 'Foresight' report, in liaising with Defra and the Environment Agency, and in taking part in influencing European discussions on flood management?

A3: The Foresight report has been made available to all NTAG members, and the Executive is planning its own 'Foresight' event; Defra and the EA are represented on NTAG, and NTAG has been invited to visit the EA; the main EU policy discussions on flood management are held under the auspices of the 'Water Directors' group (senior water policy civil servants) and the Executive is part of the UK delegation to that group.

Perth case study (scheme approved & funded; defences installed)

Comment: As well as the limited options upstream, the downstream tidal influence on floods in Perth are a further factor justifying the eventual floodwall solution.

Elgin case study (application for scheme in preparation; options explored)

Q: How were alternative options, including upstream storage, considered?

A: Many of the areas where upstream storage is feasible are protected under environmental designations; diversion and tunneling were also considered. The high cost of alternative options was the strongest influence in arriving at the preferred option.

Q: A cost of £100m is very high, and difficult to justify if it mops up a budget which other schemes have a call on.

A: Hope to manage the cost down to £40m, in part by offsetting costs against some of the urban regeneration benefits that could be worked into the scheme (e.g. in relation to waste, recycling, access, and other possible synergies such as inputs from developers).

Glasgow case study (strategic urban plan; many small projects over wide area & time)

Q: What's being done to maximise 'local community buy-in'?

A: A lot of preparatory work has gone into modelling stage; now approaching stage of sharing ideas and possible solutions with the public

Glenurquhart case study (early stages; strong rural community/land use focus)

Comment: The project could very usefully focus on particular interactions of trees and floods, e.g. will tree cover slow down some flood flows; what sort of habitat can be created in a functioning floodplain; how serious is the problem of downstream blockages (log jams etc) where trees are washed downstream, and how might this be handled.

General discussion of case study messages:

- (a) Questionable what benefits changing rural land management may have for higher return period events – and may take a long time if relying on growing trees as part of the solution. Active debate in Europe (Rhine floods etc) about this: land use solutions still have value at medium/low flood return periods/flood flows
- (b) German partners in the Glenurquhart ‘SAFER’ project are developing models to simulate effects of changes in rural land cover/land management
- (c) Sediment movements (erosion, deposition, blockage) are a feature of each of the case studies, although from different perspectives. Interventions to change behaviour of flows also change behaviour of sediment movement. Poorly understood processes, need much greater involvement of geomorphologists in practical management.
- (d) Scotland struggling to get away from the reactive approach to tackling flood risk. Difficult to be proactive when severity of recent events hard to predict from period of record. Difficult to ‘retrofit’ solutions in cases where floodplains have long history of being highly valued for their fertility, focus for settlement & transport etc. Also long history of neglect and abuse of urban drainage systems: problematic legacy of Scotland’s industrial past, compounded by modern problems (e.g. flytipping).
- (e) Messy situation regarding common law duties for culverts and storm sewer overflows – difficult for authorities to pursue
- (f) Flood tolerance – people prepared to accept more in the past, and cope with floods (different now – stereos, carpets, etc). Heavy development pressure in recent years into flood-prone areas. Society generally now is much more risk-averse – raising tough questions about how much to pay to reduce the risks
- (g) Often long history of flooding e.g. 200y Glenurquhart (bridge losses; loss of land due to erosion) local projects set up here especially to tackle riparian owners concerns. No particular recent flood events, although history of hard engineering to protect banks.
- (h) Case study speakers covered very different scenarios in catchment size, behaviour & ‘naturalness’; different return period floods; different risks facing different sizes of settlement. Major challenge for today’s seminar (and for NTAG) to find a way forward which reflects/captures that range & complexity.

Discussion after feedback from afternoon workshops:

- (a) NTAG members present today would ensure that the ‘plain English’ message goes back to NTAG
- (b) Given the range of good practice discussed today, there was the potential to combine this with other experience in a new manual, which would not set prescriptive guidelines demanding specific solutions, but highlight which options might be pursued, and how/why
- (c) Some intangible costs in CBA which needed to be taken account of (stress, illness); work on the ‘Thames Gateway’ proposals showed how this might be pursued – this was the sort of issue NTAG would move on to in considering indicators for Sustainable Flood Management
- (d) Discussion about barriers to a more proactive approach to SFM suggested to some that current legislation would only allow schemes to be promoted once a flood event had

happened. Others felt that duties on Local Authorities under the 1997 Act provided the basis for a proactive approach.

- (e) Accountability and responsibility important issues here – is it the job of local authority staff and councillors to protect the population from flooding, and if new authorities or different authorities are to be given roles, how are they to be held accountable?
- (f) European debates on sustainable flood management are moving ahead quite quickly, and Scotland risks falling behind – its time for some quick decisions to clarify roles and responsibilities so that Scotland can move ahead
- (g) Not all of the issue raised today are for those who propose flood defence schemes; the need for a flood management solution may open up a wider debate about social/urban planning, or urban re-design. Community well-being may come to the fore here.
- (h) This may also influence rural planning and strategy. Integrated planning should be pursued via Catchment Flood Management Plans, linked to wider land use/water use issues via WFD River Basin Management Plans
- (i) The COSLA Flooding Task Force report made a number of detailed recommendations about the role of SEPA, the need for a national technical group, and the need for new legislation. Some of these have already been taken forward (e.g. by setting up NTAG). However, local authority flood management activities are closely governed by statutory duties and powers. Primary legislation would be needed to change these duties/powers (and access to associated funds) to trigger the investment in new ideas needed to take forward some of the issues discussed today

Chairman's Conclusions:

- (a) Felt like a very useful day – bringing practitioners and policy-makers together
- (b) Overall, NTAG draft definition, objectives & principles have had a reasonable reaction, subject to the need for clearer language, and to combine/dispense with some principles (capturing the ideas elsewhere in NTAG's approach)
- (c) No grounds for complacency on seriousness of flood risk challenge– difficult legacies of the past (distant past – location of settlements & transport corridors; recent past - poor planning decisions) and predictions for the future (climate change scenarios - Foresight report), but this generation carries heavy responsibility to act
- (d) Need for more 'proactive integration' to avoid heavy losses from floods – use Catchment Flood Management Planning to integrate development planning and WFD planning
- (e) Hard-engineered solutions will still be needed, but working with nature/natural processes should be considered up-front in seeking future solutions
- (f) Some grounds for optimism (e.g. from today's case studies) that Scotland is 'on the case' already – good practice examples, although more effort needed on the proactive planning matters (SPP7 etc)
- (g) Good flood management solutions can meet a range of public policy objectives (not just managing flood risk), and may open up access to other public (or even private) funding streams
- (h) A range of relevant policy areas are in flux, e.g. CAP reform. Flux produces opportunities as well as confusion, so good dialogue is needed to minimise confusion and identify the opportunities. The Executive's NTAG process is a good start, with some clear outcomes expected. A clear message from today is that the Executive needs either to lead a process ensuring that sustainable flood management happens, or to instruct someone else to take the lead.

- (i)** Much of the relevant primary legislation is pretty long in the tooth, and needs updating to reflect contemporary Scottish circumstances, which vary very widely on the ground, and vary in how amenable they may be to flexible/adaptive solutions
- (j)** The statutory distinction (powers, responsibilities, funds), between managing flooding of agricultural land, and non-agricultural land, inhibits a catchment approach
- (k)** All public authorities involved need to engage communities, which is not always easy. Promoting the multi-functional benefits of a good flood management solution may offer a 'way in' to the community. Floods can disappear quickly from the memory of all but those most immediately affected – the public profile of flooding needs to be kept high
- (l)** A summary of the day's proceedings will be written up and sent to participants, and notes will be placed on NTAG website