

Building to Minimise Flood Risk



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Integrated Regulation

Flood Risk Management (Scotland) Bill 2009

1 General duty

- (1) The Scottish Ministers, SEPA and responsible authorities must exercise their flood risk related functions with a view to reducing overall flood risk and, in particular, must exercise their functions under Part 3 so as to secure compliance with the Directive.

Reducing flood risk overall

Obligation to demonstrate compliance with the Flood Directive

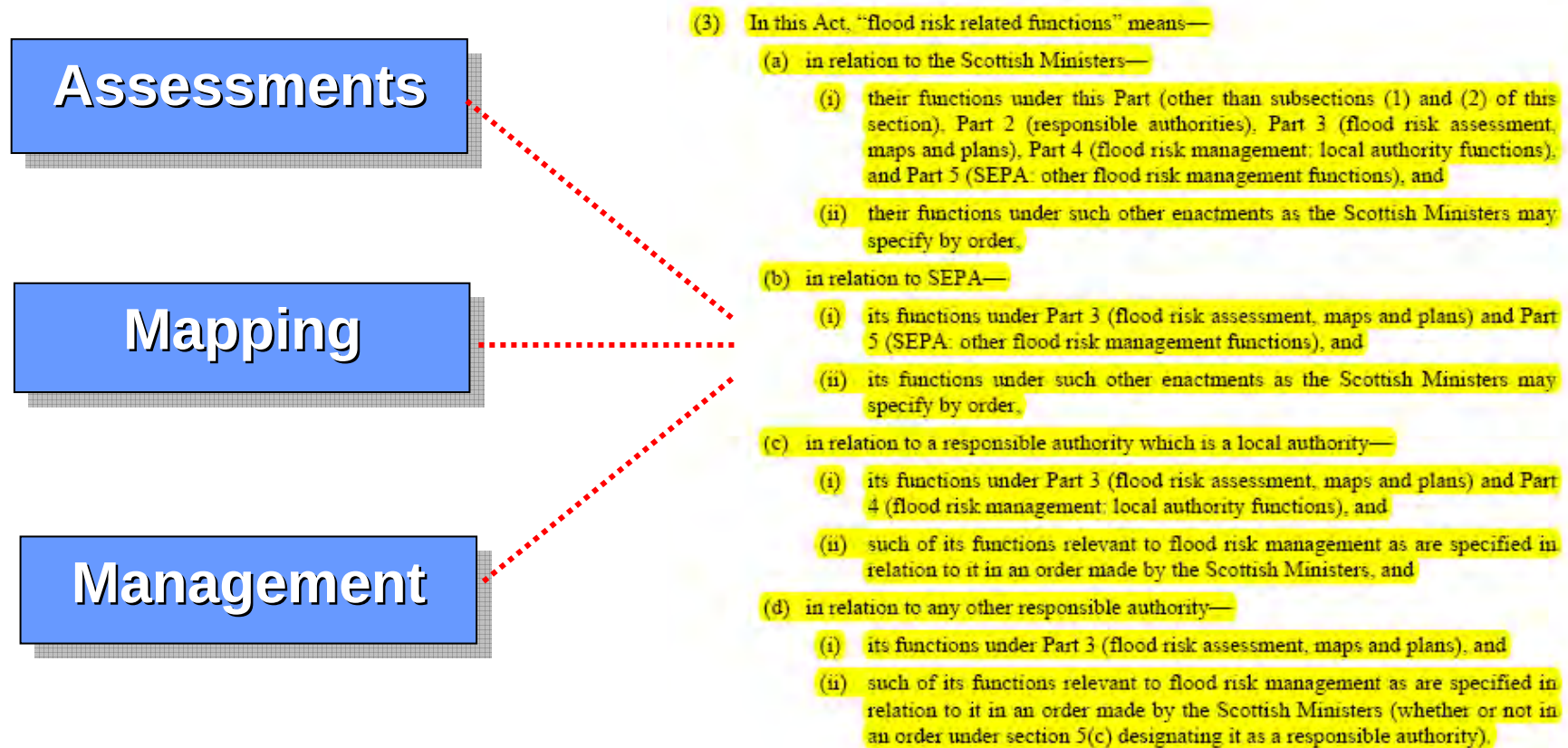
Bill provisions

- Transposes the Directive and creates a planning process that is tailored to Scotland's needs;
- Local authorities responsible for local plans;
- SEPA responsible for district (national) plans;
- Fully integrated planning process.
- but...

Will the law keep up

- What might that mean in practice ?
 - Keeping up with new legislative initiatives
 - Water Framework Directive, Energy Act, Climate Change Act
 - Targeting Technical Innovations – approaches, technology, revisions in scope
- Also...
 - Developers should be expected to innovate

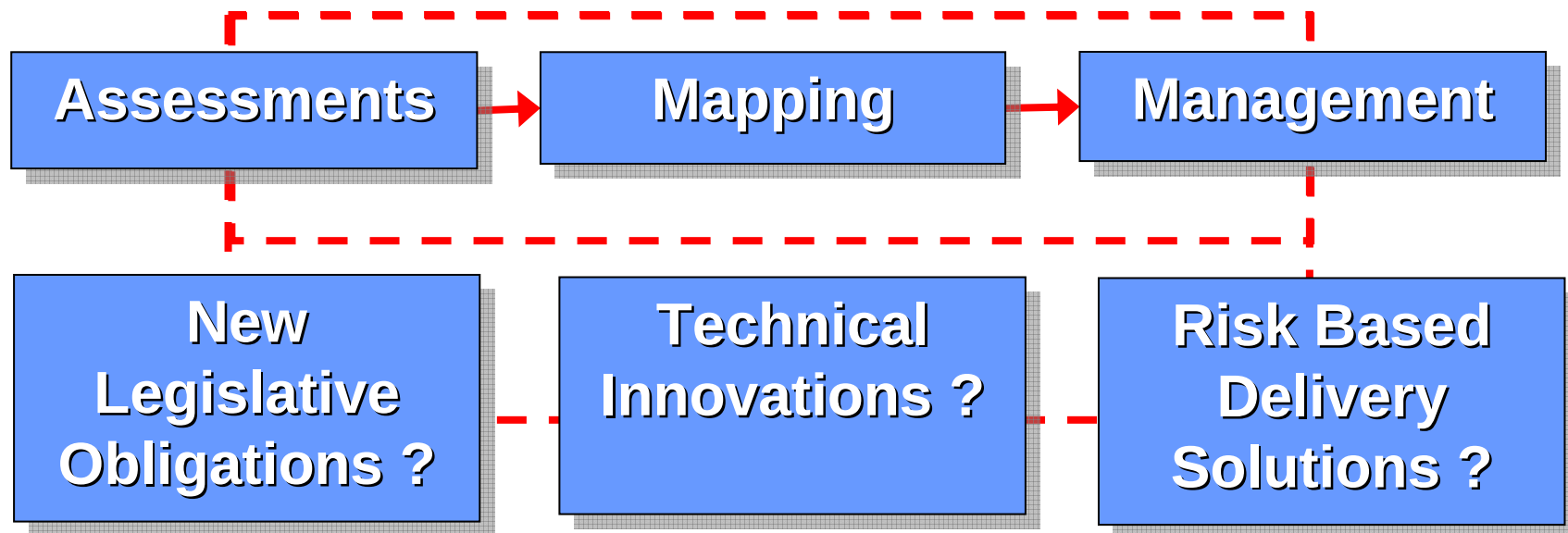
Informed Regulators – Integrated Approach



Is there room for innovation

The three main areas

Flood risk



Building on innovation

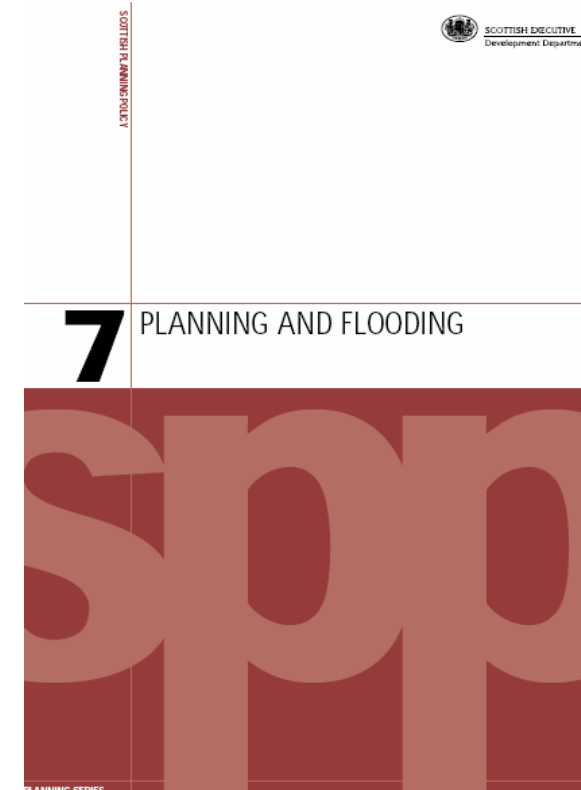
- Evidence based decision making
- Move away solely on engineering solutions
- Reduces the restrictions on the types of flood management measures
- More flexible and streamlined statutory approval process
- But...

Difficult schemes will still require lengthy determinations

- Ministerial call in
- LA input can still be substantive
- Any [material] modifications require consultation before final decision
- In other words...
- Does this stifle innovation, cause delay and go for the easy options

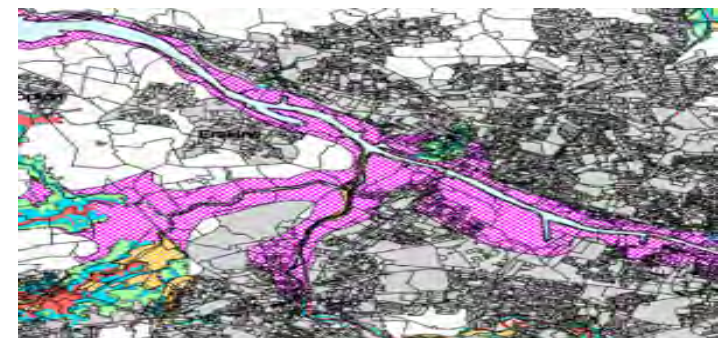
The presumption against development on the flood plain

- Planning Policy
 - SPP 7 – Planning and Flooding, para. 16 states:
“For planning purposes the functional flood plain will generally have a greater than 0.5% (1:200) probability in any year”
 - SPP 7 – Planning and Flooding, para. 17 states:
“Built development should not therefore take place on functional flood plains”



Properties at risk

- Properties at risk – withering on the vine ?
 - However, approximately 100,000 properties are at risk from flooding in Scotland (SEPA, Flood Risk Map)
 - Fluvial flooding = 68,492 residential properties and 4,821 commercial properties = 3% of all properties nationwide
 - Coastal flooding = 23,952 residential properties and 2,229 commercial properties = 1% of buildings nationwide
 - Insurance implications for business and homeowners enormous



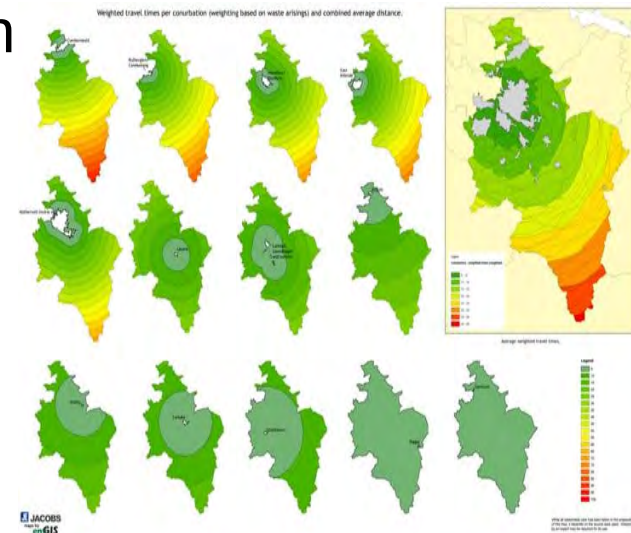
Avoidance of floodplains?

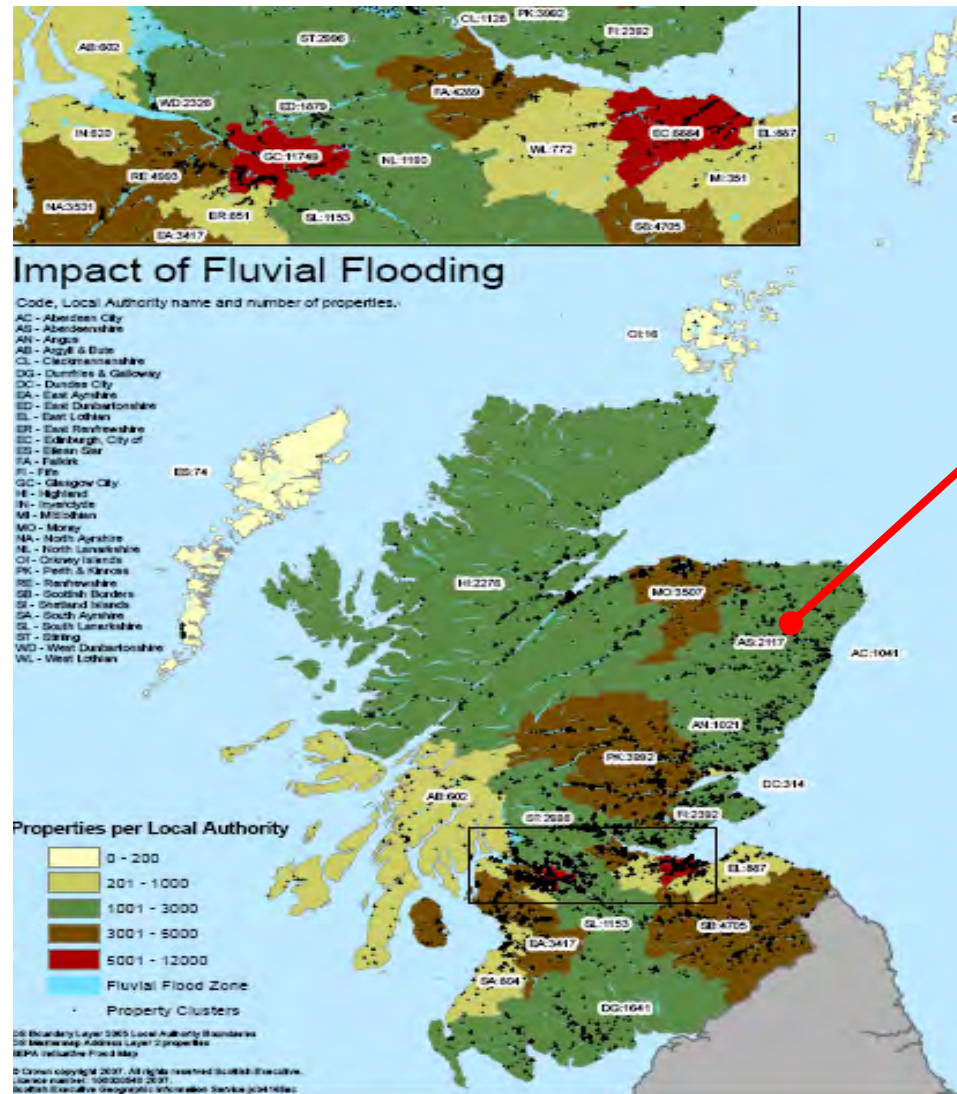
- Typical site search processes and avoidance
 - Do not take into account 100,000 properties at risk
 - Does not “reduce overall flood risk”
 - Rules out large amounts of land, putting pressure elsewhere, potentially on Green Belt or other designations
 - May lead to urban sprawl
 - Unsustainable?
 - History of town development
 - Location of central facilities
 - Availability of infrastructure



Site Selection Processes

- GIS based site selection exercises such as JSearch
 - Factually based GIS system
 - Much fuller stakeholder participation
 - Parameter based approach
 - Establish search area
 - Identify constraints
 - Identify beneficial attribute
 - Refinement
 - Determination of optimum site
 - Based on **avoidance** of constraints
 - Time for reconsideration of approach





A quick look at
Aberdeenshire

Aberdeenshire Council

- Properties at risk – 2,117 fluvial flooding
- 2009 Local Development Plan SEA
 - 505 pages
 - References to flooding: 357
 - References to innovative technical solutions: ?
 - Opportunity for risk based delivery solutions: ?
 - Direct involvement of the development industry: ?
 - Low expectations or raising the bar: ?
 - Demands on developers to find solutions: ?

As many solutions as there are sites...

- Refinement and different sort of integrated approach needed
 - Can the planning system adapt to change quickly enough?
 - Feed into Local Development Plans
 - Land raising
 - Using the landscape
 - Agricultural Land Uses
 - Technology
 - Pumps, Control Panels, Diversionary Works by Scottish Water
 - Innovation in the supply chain
 - Extending the flood plain into other areas where values are depressed
 - Partial flooding
 - Link flood risk areas with integrated technical or engineering solutions that safeguard existing at risk properties
 - Use this new evidence base to make different decisions
 - Will we be able to think the unthinkable ?

Look to the delivery rather than the constraint

- Tensions between constraint & potential outcomes
 - Are we in the no go zone ?
- Opportunities found in the evidence base
- Mitigation challenges for environmental practitioners
- Potential opportunities
 - Resolve existing flood risk problems rather than avoiding them
 - Recognise the commercial stimulus to constrained sites
 - Sustainable flood mitigation systems
 - Sustainable urban forms



Questions and Contact

- Contact

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