

APPENDIX I

IMPLEMENTATION PROGRAMME: (Identified areas only; includes all watercourses)

TIMESCALE (0=start)	PHASE	DETAILS
0 to 9 months	1	<p>a) Issue of existing S24(5) survey data to each LPA; obvious updates to be included if possible; intended to impart general but representative nature of flooding to LPA's; LPA's must be made aware of limitations.</p> <p>b) Agreement of a programme of work with LPA's, including, where possible, the appropriate level of survey data for each location (parameters A&B, or other) beyond that required for NRA use.</p>
0 to 2 years (1996)	2	<p>a) Completion of 50% of accurate flood envelope delimitation work; map scales as specified below.</p> <p>b) Surveys to include agreed Primary data, which may be selected from Parameters A below.</p>
2 to 5 years (1999)	3	<p>a) Completion of full work programme to phase 1 standards above.</p> <p>b) All surveys to include agreed Secondary data, which may be selected from Parameters B below.</p>
1999 onwards	4	<p>a) Inclusion of remainder of watercourse lengths (essentially rural watercourses with little or no development potential); degree of data and accuracy to be subject of future agreement if surveys required.</p>

TYPES OF DATA WHICH MAY BE APPLICABLE

Physical or Primary Data (Parameters A)	Calculated or Secondary Data (Parameters B)
<ul style="list-style-type: none"> • Min map scales <ul style="list-style-type: none"> i) Rural 1:10,000 ii) Urban 1:2500 or 1250 • Flood envelopes: at least 100 Yr, with consistently agreed flow data. • Relevant boundaries (+ SSSI's etc) • NRA assets + details + areas protected. • Non NRA defences + details + areas protected. • Floodplain contours + plus survey (in 0.25m intervals in sensitive areas) • Channel cross-sections + survey data. • Strategic flood storage areas (boundaries) • Land use + SoS data. • Natural defences • Tidal inundation limit (200yr SWL min.) • Vulnerable areas: esp. from wave action/surges. • Maintenance requirements (accesses) • Threshold levels of endangered properties. 	<p>Essentially supporting data, eg.:-</p> <ul style="list-style-type: none"> • Storage/discharge details. • Surface water profiles. • Channel spillage regime. • "End dates" of assets. • Blockage possibilities (via modelling runs). • Erosion/accretion details. • River corridor survey data. • Managed retreat/Set back. • Coastal erosion. • Development constraints. • Measures to overcome flood risk constraints. • Urban 'green corridors'. <p>Application beyond NRA use to be agreed with LPA for each location.</p>

a matter of course and in the spirit of partnership.

Particular reference is made to effective consultation arrangements with regard to land use planning, in considering the effects of the planning process on flood risk. Government guidance is contained in circular DoE 30/92 [MAFF FDI/92, Technical Advice Note (Wales) 15] on *Development and Flood Risk*. Whilst LA's will have some knowledge of flooding problems in their area which will assist them, this should not be regarded as an alternative to seeking the Agency's advice.

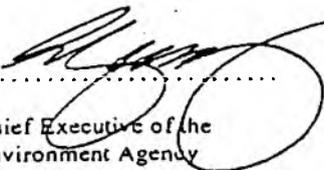
6.0 Implementation

Flood defence presents many challenges in the United Kingdom and internationally at all levels of government. At local level, officer to officer contact should be conducted in a spirit of mutual understanding, but with due and careful regard to the limits of statutory responsibility. LA's and the Agency are expected to establish clear lines of communication for staff in both organisations, and to have specific and local arrangements for contact, especially with regard to emergency and other 'out of hours' issues.

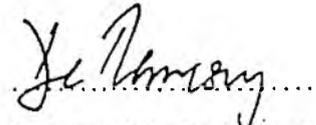
7.0 Joint Review Committee

The parties to this Technical Protocol shall meet to discuss any issues that arise from it not less than once a year, and the chair will be taken by each party in turn, starting with the Agency.

Signed for the Environment Agency

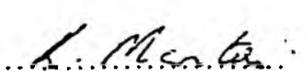

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Chief Executive of the
Environment Agency

Date 11/8/98


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Chairman of the Environment
Agency

Date 11/8/98

Signed for the Local Government Association


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Chair of the Waste and
Environmental Management
Committee of the Local
Government Association

Date 11/8/98



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3.2 Emergencies

During major flood events, the Agency issues flood warnings and maintains and operates flood defence works. Public safety issues are the responsibility of LA's and the emergency services. The police co-ordinate the response in major emergencies. Along with the Fire & Rescue Service they provide help during the evacuation of properties. (The planned technical protocol on Emergencies will cover flood defence issues as appropriate.)

3.3 Policy

Overall policy for Flood & Coastal defence in England and Wales is set by the Ministry of Agriculture, Fisheries and Food (MAFF), and the Welsh Office (WO).

4.0 Co-operation Protocol

4.1 Agency Information

The Agency and LA's, individually, hold much information about flood risk. The Agency has a large scale national programme of mapping flood risk areas, according to priorities identified with Planning Authorities. This programme is known as Section 105 surveys (from the Water Resources Act 1991, and Circular DoE 30/92, MAFF FDI/92, Technical Advice Note (Wales) 15), and was originally described in Appendix 1 to the MoU of March 1994, and now repeated in this Technical Protocol as Appendix 1.

The relative priorities of the Section 105 surveys programme in Appendix 1 remain valid, and the Agency is committed to continuing the survey programme, subject to the availability of funds and timing. This may vary between Agency regions. The Agency is currently reviewing the survey programme, and a new version of Appendix 1 will be added to this Protocol when the review is complete.

The results from the survey programme are copied to the relevant LA's as they become available.

Flood Warning Dissemination Plans are prepared by the Agency in consultation with LA's and others, and copies of plans for specific areas can be inspected in the relevant Agency or LA office.

4.2 Local Authority Information

LA's will endeavour to provide the Agency with any information in their possession relating to flood defence or land drainage, sought by the Agency in order to carry out its flood defence function.

5.0 Consultation

The Agency and LA's require a productive working relationship. With due regard to the delineations of statutory function, it is expected that each body will consult with the other, as

3.0 Shared

The Agency and LA's have a common interest in seeking to avoid the creation or worsening of flood risks. Both also share a common interest in promoting development which does not impose undue burdens on future generations because of ongoing expensive maintenance works or severe environmental damage. The Agency seeks to safeguard rivers and their corridors, and encourages LA's to agree that they are finite, natural resources which should be safeguarded. Additionally, wherever possible, consideration should be given to the regeneration of river corridors, especially in urban areas.

Development of any land can increase flood risk, and the cumulative effects of development has a similar effect. This often leads to an increased demand for flood alleviation schemes, often at public expense. The Agency and LA's AGREE that the flood risk implications of new development should be identified at the planning stage, and addressed by the developer. Guidance on how LA's should address development and flood risk in liaison with the Agency is contained in circular DoE 30/92 [MAFF FD1/92, Technical Advice Note (Wales) 15] *Development and Flood Risk*, and *Policy and Practice for the Protection of Floodplains* published by the Agency in March 1997. (The planned technical protocols on Development Planning and LEAPS will cover flood defence issues as appropriate.)

All of the above necessitates a long term commitment to the delivery of a Flood Defence service to the community at large. This commitment is primarily demonstrated through long-term, strategic planning and funding. MAFF has recently issued Interim Guidance (July 97) for the Strategic planning and Appraisal of Flood and Coastal Defence Schemes. The preferred option for coastal defence (sea defence and coast protection) is being determined by Shoreline Management Planning, and this type of strategic approach will be applied to river catchments in the future, across all flood defence activities. It will help promote long term sustainability, and provide opportunities to assess risk and sensitivity at the broadest level.

MAFF/WO has encouraged the establishment of voluntary coastal defence groups around the coastline of England and Wales, with the Agency and LA's as the main constituents. A national Coastal Defence Forum meets regularly under the auspices of MAFF/WO. The forum encourages a strategic approach to coastal defence issues, the sharing of expertise, and the promotion of best practice.

The Agency and LA's are each producing Water Level Management Plans where water level control affects Sites of Special Scientific Interest. Generally, the Agency is producing them for sites related to "main river", and LA's for ordinary watercourses. These plans contribute to Biodiversity Action Plans.

Water Level Management Plans and Shoreline Management Plans inform both County Structure Plans and Local Development Plans where appropriate.

3.1 Regional Flood Defence Committees (RFDC's)

The majority of the Agency's Flood Defence functions are the responsibility of RFDC's. These committees include councillors nominated by LA's, and members appointed by MAFF, the WO and the Agency. Members nominated by LA's make up the majority of the committee membership, and effectively determine the level of funding provided to Flood Defence in the Agency.

"ordinary watercourses". Main rivers are shown on statutory maps held by the Agency and MAFF/WO. All other rivers, streams and watercourses are ordinary watercourses. Consent from the Agency is required for structures in, over or under main rivers, and for obstructions in non-main river watercourses.

- The Agency's Land Drainage byelaws generally apply to main rivers and their floodplains, and to areas within particular distances from flood and coastal defences. Typically, Agency consent is required for the erection of structures, excavations, planting and mooring etc.
- Agency consent is required in addition to Planning permission, and it is therefore a shared interest to encourage early consultation with the other party so that all requirements can be met.

Most Flood Defence powers are permissive, and do not confer any statutory obligation for the Agency or others to provide protection from flooding.

2.2 Local Authorities

Local Authorities [whether as County, District, Metropolitan or Unitary Councils] [hereafter referred to as LA's] have played a significant role in flood defence and coast protection for many years.

- LA's may carry out works on watercourses, other than "main rivers" and those in Internal Drainage Board areas, in order to alleviate flooding from rivers or the sea. LA's also have certain powers of enforcement on ordinary watercourses.
- Maritime district councils (district councils which adjoin the sea) have powers to protect the land against erosion or encroachment by the sea (coast protection)
- LA's produce contingency plans for civil emergencies and work with the emergency services to co-ordinate a response. They also respond to the local effects of flooding, including assistance to those at risk from or affected by flooding. In some cases they provide sandbags in areas at risk from flooding. (The planned technical protocol on Emergencies will cover flood defence issues as appropriate.)
- LA's have powers under the Town & Country Planning Acts to regulate land use within England and Wales. (Planning Authorities are responsible for protecting the flood defence interests of people whose property may be affected by development proposals.)
- LA's can make byelaws which apply to non-main rivers to ensure the efficient working of the drainage system, and to the coast.
- Local authorities as highway authorities are responsible for draining highways. This includes preventing water from flowing onto a highway, together with certain responsibilities for bridges and culverts under the Highways Act 1980.

FLOOD DEFENCE

TECHNICAL PROTOCOL

The threat from flooding is always with us. Flood risks can be reduced, but they can never be eliminated completely.

1. Introduction

The Local Government Association and the Environment Agency agreed a general Memorandum of Understanding (MoU) on 14 February 1997, and it was envisaged that a number of specialist protocols would be developed. This is the Technical Protocol for Flood Defence, and replaces any previous arrangements between the LGA, the Agency and predecessor bodies concerning Flood Defence, such as the previous MoU entitled "Development and Flood Risk" agreed between the National Rivers Authority, the Association of County Councils, the Association of District Councils and the Association of Metropolitan Authorities in March 1994. This Technical Protocol hereby replaces the March 1994 MoU except for Appendix 1, which is hereby incorporated into this Technical Protocol as Appendix 1.

- Approximately 10,000 km² (or 7% of total area) of land is at risk from river flooding in England and Wales.
- Approximately 30% of the coastline of England and Wales is developed.
- Globally, damage from flooding is greater than from any other form of natural disaster.

2.0 Roles and Responsibilities

2.1 The Environment Agency

The Environment Agency [hereafter referred to as 'the Agency'] has been established with the primary role of 'protecting and enhancing the environment in line with the government's overall commitment to sustainable development'. Part of this role involves managing flood risk. This is done by:

- supervising all matters relating to flood defence in England and Wales.
- advising planning authorities on the implications of development proposals on flood risk issues and the environment
- carrying out works to reduce the risks of flooding from designated rivers called "main rivers" and the sea.
- issuing flood warnings and preparing written Dissemination Plans.
- clearing obstructions from rivers which may cause a flood hazard.
- using our powers to consent works that may affect flood risk

The flood defence powers of the Agency are generally permissive, and are complemented by the wider planning powers of Planning Authorities to control development in flood risk areas.

- Rivers and watercourses are divided into two legal categories "Main Rivers" and

