

ABERDEENSHIRE COUNCIL

FLOODING
IN
ABERDEENSHIRE

FIFTH BIENNIAL REPORT

THE FLOOD PREVENTION & LAND DRAINAGE (SCOTLAND) ACT 1997

DECEMBER 2005

Flooding in Aberdeenshire

SUMMARY REPORT

Aberdeenshire Council publishes a report on flooding every two years to inform Aberdeenshire Residents. The last report was published in November 2003. This, the Fifth Biennial Report, covers the period from November 2003 to the present time.

All flood events reported to the Council have been investigated. Over 70% of the flood events recorded over the last two years were due to local land or road drainage systems being overwhelmed by the intensity of rainfall. In most cases, improvement action was agreed in conjunction with the various people involved. Frequently, it was for individual land owners to carry out these improvements. Road drainage improvements where required have been included in annual road maintenance programmes, prioritised against other demands. Basic maintenance work has been carried out on watercourses where to do so would reduce the likelihood of properties being flooded. Improvements to watercourses to reduce the likelihood of flooding have been carried out at some of the locations where significant flooding occurred in Autumn 2003. Other improvements are planned, some on a large enough scale to require authorisation by the Scottish Executive.

The report details briefly all the flooding incidents reported to Aberdeenshire Council. The locations of flooding tabulated are deliberately vague to avoid unnecessary concern and possible blight. Any member of the public who has a legitimate interest may come into the Councils Office at Carlton House, Stonehaven and look at the flood records for any particular location. Alternatively, by arrangement, some records can be made available for inspection at any local Aberdeenshire Office. Contact details are given at the end of the report.

A "Flood Action Network" based on the well established Neighbourhood Watch has been established with a first group in Port Elphinstone. Other communities who are at risk of flooding from watercourses are encouraged to join the network.

Many of the opportunities to carry out flood prevention work on river systems also provide opportunities for improving natural habitat, water quality and biodiversity, and vice versa. Aberdeenshire Council is working in partnership with agencies such as SEPA, SNH, Scottish Water and the Salmon Fishery Boards and with land owners to achieve sustainable flood prevention maximising flood plain storage. Flood Prevention Schemes on this basis are due to commence in 2006 at Fettercairn and Marykirk and are planned for Aboyne and Tarland.

ABERDEENSHIRE COUNCIL

FIFTH BIENNIAL REPORT - DECEMBER 2005

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1. **Reason for Report**

1.1 This report specifies the measures which Aberdeenshire Council consider they require to take to prevent or mitigate flooding on non-agricultural land within Aberdeenshire. This report is published as required by the Flood Prevention & Land Drainage (Scotland) Act 1997.

1.2 This report details :

- (1) all the flood events which have occurred since the publication of the Fourth Biennial Report;
- (2) all the measures which Aberdeenshire Council have taken to prevent or mitigate flooding since publication of the Fourth Biennial Report;
- (3) all the further measures which Aberdeenshire Council propose to take to prevent or mitigate flooding.

1.3 This report is based on a review of all the information which is available to Aberdeenshire Council at the present time and proposes actions considered necessary arising from that review. As it is intended primarily to inform Aberdeenshire Residents, the use of technical terms has been kept to a minimum. Nevertheless, technical terms are unavoidable in a report which is essentially technical. Synonyms have generally been defined within the text where first encountered. Please refer to Appendix A at the back of the report for a glossary of terms used in the text.

2. Flood Events in Aberdeenshire between November 2003 and November 2005

- 2.1 The general weather pattern over the two-year period covered by this biennial report has been “dry to normal”. The exceptionally wet period in Autumn 2002 was followed by generally dry weather in 2003/04 and more normal weather in 2004/05. The saturated ground conditions typical of most of 2002 were followed by dry ground conditions through most of 2003 and 2004 and more normal ground conditions in 2005. Consequently, heavy rain did not cause watercourses to overtop as frequently during the reported period 2003 to 2005 as during the period covered by the previous biennial report.
- 2.2 Local flood events occurred in Aberdeenshire during the period November 2003 to November 2005 as tabulated by river catchment below. See Appendix B for details of community locations and river catchments.
- 2.3 No major flood events occurred in Aberdeenshire during the reported period. Of all the flood problems reported, 72% related to land and/or road drainage problems; 26% related to watercourses.
- 2.4 Incidents of flooding reported to Aberdeenshire Council were investigated and assessed. The locations of flooding tabulated are deliberately vague to avoid unnecessary concern and possible blight. Any member of the public who has a legitimate interest may come into the Councils Office at Carlton House, Stonehaven and look at the flood records for any particular location. Alternatively, by arrangement, some records can be made available for inspection at any local Aberdeenshire Office.
- 2.5 Aberdeenshire Council has adopted an internal Performance Indicator (PI) to measure the percentage of flood reports which are investigated within 10 working days of having been reported. Since inception in early 2005, the PI for investigation of flood incidents has consistently been 100%.

DATE	LOCATION	WATERCOURSE	INCIDENT	DETAILS	ACTION
Jan 2004	Turriff - Turriff Golf Club.	Deveron	Flooding of golf course.	River Deveron regularly overtops onto golf course.	Advice to riparian owners
Jun 2004	Cornhill	N/A	Flooding of various domestic properties.	Run off of heavy rain on road and adjacent fields. Inability of road ditches to cope. Water could not outfall.	Consultation with property owner.
Jun 2004	Huntly – South-East	N/A	Flooding of domestic properties.	Run-off from heavy rain on roads. Insufficient sewer capacity.	Consultation with Scottish Water.
Jun 2004 Nov 2005	Whitehills	N/A	Flooding of domestic and commercial properties.	Run off from heavy rain on roads. Drainage system unable to cope.	Advice to property owners. Consult Area Roads Maintenance.
Jul 2004	Huntly – Central	N/A	Flooding of domestic properties.	Run-off from heavy rain on car park and adjacent fields. Drainage system unable to cope.	Consultation with Scottish Water.
Jan 2005	Turriff - East	Turriff Burn	Flooding of domestic properties.	Run-off from heavy rain on adjacent grassed field. Existing drainage system unable to cope.	Consultation with developers.
Feb 2005	Huntly - East	River Bogie	Flooding of domestic property.	River Bogie overtops into adjacent play park and runs back into domestic property.	Design and construct flood banks to protect property.
May 2005	Sandend	Issues	Flooding of commercial land.	Run off of heavy rain from adjacent fields backs up from small road culvert and floods nearby commercial land.	Consultation with Scottish Water.
Jun 2005	Turriff – West	N/A	Flooding of domestic properties.	Run-off from heavy rain on roads. Drainage system unable to cope.	Consultation with Scottish Water.

Deveron Catchment – Flooding Incidents Nov 03 to Nov 05

The Flood Prevention & Land Drainage (Scotland) Act 1997
Fifth Biennial Report - December 2005

DATE	LOCATION	WATERCOURSE	INCIDENT	DETAILS	ACTION
Jan 2004	Fraserburgh – South West	Issues	Flooding of domestic access.	Run off from heavy rain on adjacent fields ponds at access to domestic property.	Advice given to property owner. Civil dispute with local farmer.
Jun 2004	Fraserburgh – North East	N/A	Flooding of domestic property.	Run off from heavy rain on roads. Inability of road drains to cope. Water could not outfall.	Local roads maintenance dealing with problem.
Dec 2004	Cairnbulg	Field issues	Flooding of domestic property.	Run off from heavy rain on adjacent fields ponds at rear of properties.	Advice to property owners and consultation with contractors.
Jan 2005	Cruden Bay Golf Club	Issues	Flooding of golf course	Erosion of culvert causing water to back up and overtop onto golf course.	Advice given – riparian problem.
Mar 2005	Fraserburgh Beach	N/A	Perceived coastal flooding problem.	Previous rock armouring works may be causing a problem with sand migration.	Monitor and study.
Oct 2005	Peterhead – Central	N/A	Flooding of domestic property.	Run off from heavy rain on roads. Inability of road drains to cope. Water could not outfall.	Local roads maintenance dealing with problem.
Dec 2005	Longside – South	Field issues	Flooding of domestic property.	Run off from heavy rain on adjacent fields overtops ditch running through domestic land.	Advice given to property owner. Local planning office contacted regarding on going development.

Ugie Catchment – Flooding Incidents Nov 03 to Nov 05

DATE	LOCATION	WATERCOURSE	INCIDENT	DETAILS	ACTION
Jan 2004	Oldmeldrum – North East	Issues	Flooding of domestic property.	Overtopping of millrace caused flooding of domestic property.	Consultation with millrace owners. Mill sluice and lade to be monitored and maintained by owners.
Jun 2004	Rothienorman – South	Issues	Flooding of domestic property.	Surface water ditch crossing to sewage works is undersized and backed up water floods domestic property.	Consultation with Scottish Water.
Jul 2004	Rothienorman Sewage works.	N/A	Flooding of Public/Private property.	Undersized pipe installed in access to sewage works. Overflow backup running into adjacent house.	Consultation with Scottish Water.

Ythan Catchment – Flooding Incidents Nov 03 to Nov 05

DATE	LOCATION	WATERCOURSE	INCIDENT	DETAILS	ACTION
Jun 2004	Sauchen	Ton Burn	Flooding of domestic properties	Run off from heavy rain on road and adjacent gardens. Inability of road gullies and insufficient capacity of outfall meant water backed up and flooded adjacent properties.	Consultation with developers and planners.
Jun 2004	Inverurie – North East	Issues	Flooding of domestic property.	Overtopping of reservoir and run off from field entering garden and flooding property.	Consultation with Scottish Water.
Jun 2004	Insch – South West	The Shevock	Flooding of residential property.	Run off from heavy rain on car park and adjacent fields. Inability of drainage to cope meant water could not outfall.	Advice offered to building owners.
Aug 2004	Insch - North	Valentine Burn	Flooding of domestic property.	Run off from heavy rain. Road drains unable to cope.	Flood study of area sanctioned by Aberdeenshire Council.
Aug 2004	Insch – West	Valentine Burn	Flooding of commercial property.	Run off from heavy rain. Road drains unable to cope.	Flood study of area sanctioned by Aberdeenshire Council.
Aug 2004	Kintore - East	River Don	B977 road flooded.	Don burst banks and inundated road.	Road temporarily closed.
Feb 2005	Swailend – Newmacher	Elrick Burn	Flooding of domestic property and public road.	Run off from heavy rain on roads and adjacent fields. Water ponding on road and flooded domestic property.	Advice offered to property owners.
Apr 2005	Kintore – East	Loch Burn	Flooding of commercial land.	When water levels are high Loch Burn backs up from confluence with Don and floods area of land between two railway culverts.	Consultation with landowners and Network Rail. Possible re-routing of burn.

Don Catchment – Flooding Incidents Nov 03 to Nov 05

DATE	LOCATION	WATERCOURSE	INCIDENT	DETAILS	ACTION
Apr 2005	Whiteford – Pitcaple	Field issues	Flooding of domestic properties.	When water levels are high road culvert capacity insufficient to cope and water backs up and floods domestic properties.	Flood study sanctioned by Aberdeenshire Council.
May 2005 Jun 2005 Oct 2005 Nov 2005	Inverurie – Central	Strath Burn	Flooding of domestic and commercial property.	When water levels are high water backs up from culvert and floods commercial and domestic properties.	Increased maintenance regime to ensure culvert entrance remains free of debris. Drainage study of area sanctioned by Aberdeenshire Council.
Sep 2005	Alford – North West	Field issues	Flooding of domestic property.	When water levels are high water backs up from culvert and floods domestic property.	Advice offered to property owner.
Oct 2005	Old Rayne – Leslie Park	Field issues	Flooding of domestic property.	Run off from heavy rain on road and adjacent fields causes drainage system to overtop onto domestic gardens.	Consultation with planners. Development as yet unfinished.

Don Catchment (continued) – Flooding Incidents Nov 03 to Nov 05

DATE	LOCATION	WATERCOURSE	INCIDENT	DETAILS	ACTION
Jun 2004	Westhills – South West	Brodach Burn	Flooding of domestic properties.	Run off from heavy rain on road and adjacent field. Inability of road drains to cope. Water could not outfall.	Consultation with Area Roads Maintenance.
Aug 2004	Westhills – West	N/A	Flooding of domestic property.	Run off from heavy rain on road runs onto driveway and floods property.	Road re-shaping, resurfacing and installing of gullies/deflector bump at driveway access.
Jun 2005	Logie Coldstone	Logie Burn	Flooding of domestic land.	When water levels are high burn overtops and floods domestic land.	Advice given to landowner.
Dec 2005	Tarland – South West	Field issues	Flooding of domestic property.	Run off from heavy rain on adjacent fields cause field drain to back up and flood domestic property.	Flood prevention scheme on going.

Dee Catchment – Flooding Incidents Nov 03 to Nov 05

DATE	LOCATION	WATERCOURSE	INCIDENT	DETAILS	ACTION
Jan 2005	Tangle Ha	N/A	Coastal flooding.	Damage to coast protection structure caused minor collapse.	To be included in future routine maintenance budget.
Apr 2005	Stonehaven beachfront	N/A	Coastal flooding	Coastal erosion caused collapse of seawall foundations.	Emergency repairs carried out.
May 2005	Stonehaven – South East	Carron Water	Bank protection erosion.	Undercutting of roadside bank protection.	Works order issued for repair to damage. Repairs carried out Sept 05.
Dec 2005	Auchenblae – North	Luther Water	Damage to commercial property.	Bank erosion caused tree to fall on to commercial property causing substantial damage.	Advice given. Riparian issue.

Kincardine Coastal Streams Catchment – Flooding Incidents Nov 03 to Nov 05

3. Action Taken by Aberdeenshire Council under the Flood Prevention & Land Drainage (Scotland) Act 1997 since November 2003

3.1 Assessment of Watercourses

The systematic inspection and assessment of watercourses has continued. Main river channels and principal tributaries have all been inspected and an interim flood risk assessment made. A geo-morphological assessment of most of the main rivers has been carried out. In summary, the overall progress to date with the first inspection and assessment is approximately 85% complete. Locations and features which were assessed as being to some degree likely to flood have been subject to regular follow-up inspection since.

3.2 Discussion with Regulatory Bodies

- 3.2.1 The North East Flood Liaison & Appraisal Group (NESFLAG) is now well established as the forum for discussion and resolution of issues relating to the impact of development on flooding and vice versa. An integrated GIS based system to share flood related information is now established. A dedicated web-site is currently under development, to be hosted by Aberdeenshire Council.
- 3.2.2 In addition to discussion within the Flood Appraisal Group, the close working relationship developed between Development Control Officers and the Flood Prevention Team within the Council and Officers of SEPA has continued, to mutual advantage.
- 3.2.3 Ad-hoc liaison meetings are held with the fishing control bodies in Aberdeenshire.
- 3.2.4 Discussion with Officers of neighbouring councils will continue through occasional meetings to exchange information and share best practice.
- 3.2.5 The River Dee catchment has been designated as an SAC (Special Area of Conservation) and, in order to minimise the work required in carrying out appropriate impact assessments for all engineering works which may affect watercourses within the catchment, Aberdeenshire Council commissioned a generic Ecological Impact Assessment and Code of Good Practice in consultation with SNH, SEPA and the Salmon Fishery Boards. Following a period of trial, this document is being further developed to be more user friendly. Angus Council who face similar constraints and conditions to Aberdeenshire, are now sharing the development of this document as a joint initiative. It is hoped that the approach will greatly simplify the work required by both councils to meet the requirements of the Water Environment & Water Services Act (WEWS) when implemented as of April next.

3.3 Flood Warning & River Gauging

- 3.3.1 Good progress has been made toward establishing a formal flood warning scheme in Aberdeenshire, based on the existing river level gauging stations which SEPA maintain. A proposal to implement a scheme has been submitted to the SEPA Board. The warning scheme will supplement the SEPA "Floodline" Warning System and will provide more accurate warning for North East Scotland based on actual river levels continuously gauged on the River Dee and River Don.
- 3.3.2 The existing SEPA gauges are located on the main river channels and some principal tributaries. They were supplemented in 2002/03 by four telemetric river level gauges, four telemetric rainfall gauges and 20 stage-boards on un-gauged tributaries to provide earlier warning of flooding to communities with a significant flooding risk and were funded by Aberdeenshire Council. These gauges have been maintained and data collected regularly.

3.4 The Aberdeenshire Flood Action Network

To supplement the SEPA "Floodline", Aberdeenshire Council has developed a proposal to establish local community groups willing to act to protect their community during flood events. This so called "Flood Action Network", modelled on the well established and familiar Neighbourhood Watch schemes, has been started off with a group established in Port Elphinstone, Inverurie. Although still in its infancy, it is anticipated that all communities who have been affected by flooding in the past will join in the network. By doing so, much more effective protection against flooding will be realised.

3.5 The Dee Catchment Management Plan

Many of the opportunities to develop flood alleviation measures on river systems also provide opportunities for improving natural habitat, water quality and bio-diversity, and vice versa. Aberdeenshire Council readily accept the need to work in partnership with agencies such as SEPA, SNH, Scottish Water and the Salmon Fishery Boards and with land owners in order to progress flood alleviation schemes. Aberdeenshire Council are therefore assisting in the production of a Catchment Management Plan for the River Dee. It is anticipated that the holistic approach taken to catchment management will facilitate future schemes to, for example, create areas of flood plain storage and remove heavily canalised sections, both of which will reduce the peak flood discharge downstream, thereby reducing flood risk.

3.6 Works of Maintenance by Aberdeenshire Council

3.6.1 Works of Maintenance have been carried out in many locations where to do so would significantly reduce the likelihood of flooding. The demand for such works inevitably exceeds the available funding. A simple system of assessing schemes by a point score method was devised some time ago to establish relative priorities. This system takes account of flood frequency and social factors. It has been reviewed recently and is considered reasonable and workable.

3.6.2 Whenever possible, “soft engineering” methods have been utilised in Works of Maintenance. Hydraulic and climatic conditions often control the methods which may be adopted. However, Aberdeenshire Council proceeds generally on the basis of a presumption for soft engineering methods unless conditions dictate otherwise.

3.6.3 Works of Maintenance have been carried out at the locations listed below:

- Keithhall Road, Inverurie
- Bleachfield Road, Huntly
- Kingsfield Road, Kintore
- Damfolds, Aberchirder
- Loch Soy, Portsoy
- Reidhaven Street, Whitehills
- Mondynes Bridge

3.7 Flood Studies

It is often necessary to carry out a flood study in order to obtain a comprehensive understanding where the mechanism of flooding is complex. Several consultants have been commissioned from time to time for specific studies. The hydraulic models generated have been used to quantify the flood risk and to test possible solutions in order to identify the optimum solution.

Flood studies have been carried out at the following locations:

- River Deveron, Huntly
- Town Drainage System, Huntly
- Strathburn, Inverurie
- Rosehearty
- Auchnagatt
- Fyvie
- Insch
- Mill Inn/Inchferry, Maryculter
- Town Drainage System, Alford
- Station Square, Aboyne

Where appropriate, the studies will generate cost benefit analyses which will be used to justify proposals for Flood Prevention Schemes (see para 4.4 below).

3.8 Mill of Gellan, Tarland

An off-line flood storage demonstration site has been constructed on the Tarland Burn at Mill of Gellan as a precursor to a Flood Prevention Scheme for Aboyne and Tarland. An area of controlled flood storage has been created on agriculturally dormant land adjacent to the burn. A shallow pond and wetland has also been constructed to encourage bio-diversity. (This part of the works was a conditional requirement of the landowners and readily accepted by the Council but is not necessary for flood prevention purposes.) The works were completed in March 2005 at a cost of £20,000. The enthusiasm and co-operation of the landowners at Mill of Gellan is gratefully acknowledged. The scheme was supported by EU funding and the work done in partnership with SNH, SEPA, the Macauley Land Use Research Institute and Scottish Water.

4. Further Action Proposed by Aberdeenshire Council under the Flood Prevention & Land Drainage (Scotland) Act 1997 and the Flood Prevention Act 1961

4.1 Further Works of Maintenance

It is recognised that regular maintenance can contribute significantly to the prevention or mitigation of flooding. Aberdeenshire Council therefore propose to carry out further Works of Maintenance under the Flood Prevention & Land Drainage (Scotland) Act 1997 to reduce the likelihood of flooding where a significant risk has been assessed. Such works will range in size from clearing debris which blocks the watercourse to minor engineering works to provide flood protection or to improve hydraulic efficiency.

4.2 Flood Studies

Aberdeenshire Council propose to commission flood studies whenever necessary to better understand the mechanism of flooding.

4.3 Inspection and Assessment of Watercourses

Inspection and assessment of watercourses will continue as required by the Flood Prevention & Land Drainage (Scotland) Act 1997.

4.4 Flood Prevention Schemes under the 1961 Act

Authorisation is being sought for Flood Prevention Schemes under the Flood Prevention Act 1961 for works which are beyond the scope of Works of Maintenance. Schemes are currently proposed on the Cauldcotts Burn at Fettercairn, the Burn of Balmakelly at Marykirk and the Tarland Burn at Aboyne and Tarland.

Works are scheduled to start in January 2006 at Fettercairn and Marykirk at a cost of £90,000 and £45,000 respectively. In both cases, flood storage areas will be constructed to attenuate extreme flood flows involving created wetland and deliberate controlled flooding and subsequent controlled drainage of arable farmland.

A Strategic Environmental Impact Assessment has been commissioned for areas which are topographically suited for use as flood storage areas on the Tarland Burn as a pre-requisite for the application for scheme authorisation.

4.5 Flood Prevention Works on the B974 Banchory to Fettercairn Road at Strachan

Aberdeenshire Council propose to raise the road level and install flood relief structures underneath the road to prevent flooding caused by failure of the flood banks alongside the River Feugh at Strachan. This work does not qualify as a Flood Prevention Scheme under the 1961 Act because housing is not affected when flooding occurs. The works will therefore be funded entirely by the Council.

4.6 Flood Prevention Works at Boddam, Peterhead

The problem caused by surface water coming off the Trunk Road at Boddam and flooding domestic property remains unresolved despite the best efforts of Aberdeenshire Council. The Council have provided the properties with demountable flood guards to cover doorway openings and air vents as temporary flood protection meantime. An agreement to share the costs of designing a solution with the Trunk Road Authority has now been reached. Further progress will depend upon the success of otherwise of an application to the Scottish Executive for grant assistance for a Flood Prevention Scheme under the 1961 Act.

4.7 Liaison with Neighbouring Authorities

The need to ensure that neighbouring authorities are aware of significant development proposals is recognised. The North East Scotland Flood Appraisal Group serves to allow data and advice to be shared. Flood studies, Works of Maintenance and Flood Prevention Schemes are being and will continue to be jointly promoted.

4.8 Public Awareness

- 4.8.1 Increased awareness of flood records held by different agencies would be of benefit. The North East Scotland Flood Appraisal Group web site and the integrated GIS information sharing system will greatly assist awareness of and facilitate access to flood records. (Para 3.2.1 refers).
- 4.8.2 There is still much to be done to ensure that members of the public are fully aware of all the issues relating to flooding and its causes.

4.9 Flood Warning & River Gauging

The supplementary river level gauges and rainfall gauges on un-gauged tributaries will continue to provide data which is analysed statistically to provide estimates of the 100 year and 200 year return period river flow events. As time goes by and more data is collected, these estimates will be reviewed and will become increasingly reliable.

4.10 The Aberdeenshire Flood Action Network

Aberdeenshire Council will encourage and support other community groups who are at risk of flooding from watercourses to join the Flood Action Network.

5 **Funding**

- 5.1 The funding allocated to Flood Prevention in Aberdeenshire Council's Revenue Budget has allowed reasonable progress to be made in the inspection and assessment of watercourses and for some Works of Maintenance to be carried out. It is clear that the need for further Works of Maintenance will be identified as the assessment of watercourses continues. It is also clear that, by its very nature, maintenance work is in most cases repetitive. It is evident therefore that the current level of funding must be at least maintained, at least for the next 5 to 10 years.
- 5.2 The financial consequences of flood damage have traditionally been met by property insurance. The Association of British Insurers have made it clear that they will not continue to provide blanket cover against flooding as a matter of course. Insurance premiums can be expected to increase significantly for flood-prone property and may in some cases be refused. It would appear that they take into account the degree to which councils are pro-active in flood prevention when assessing insurance risk. It is to the benefit of Aberdeenshire residents therefore to maintain a reasonable level of funding for flood prevention.
- 5.3 Where appropriate, Aberdeenshire Council will seek to recover reasonable costs from parties who have responsibility and whose inactivity may have required the Council to carry out works to prevent flooding of non-agricultural land.

6 **Contact Point**

Formal enquiries arising from this report should be addressed to Ken Morrison, Head of Roads, Cape House, 21 Seafield Street, Banff, AB45 1ED or e-mail <ken.morrison@aberdeenshire.gov.uk> or via the Councils web site.

Informal enquiries should be made to Malcolm Taberner, Structures Manager, tel. 01569 768474 or e-mail <malcolm.taberner@aberdeenshire.gov.uk> or via the Councils web site.

7 **Conclusion**

This is the Fifth Biennial Report by Aberdeenshire Council under the Flood Prevention & Land Drainage (Scotland) Act 1997.

Signed.....

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MHT/S/1/175
December, 2005

APPENDIX A

GLOSSARY OF TERMS USED IN THE TEXT

SEPA

The Scottish Environment Protection Agency – a government agency tasked mainly with controlling pollution of land and water throughout Scotland and, significantly in the context of this report, also tasked with river flow gauging and river flood warning.

SNH

Scottish Natural Heritage – a government agency tasked mainly with the protection of ecology throughout Scotland.

GIS

Graphical Information System – a computerised mapping system on which data can be displayed by its location and accessed for reference.

Catchment

River Catchment – the area which drains into a river. The term can be applied to an entire river system from the mouth of the river estuary or to an individual tributary river.

Riparian

An adjective meaning on or of river banks. A riparian owner is an individual who owns the bank of a river.

APPENDIX B

TABLE OF CATCHMENT AREAS WITH MAIN WATERCOURSES,
 PRINCIPAL TRIBUTARIES AND SETTLEMENTS

Catchment	Watercourse	Settlement (or district)	
Deveron	River Deveron	Haugh of Glass	
		Blairmore	
		Huntly	
		Milltown of Rothiemay	
		Inverkeithny	
		Turriff	
		Banff	
		Macduff	
		Glenburn/Collonach Burn	(Longhill)
		River Bogie	Huntly
	Bridgend		
	Water of Bogie	Gartly	
		Rhynie	
	River Isla	Nethermills	
	Burn of Forge	Inverkeithny	
		Forge	
	Burn of Turriff	Turriff	
	Idoch Water	Cuminestown	
	Rosy Burn	Newton of Mountblairy	
	Burn of Brydock	Mill of Brydock	
Ugie	River Ugie	Inverugie	
		Peterhead	
	North Ugie Water	Strichen	
		Fetterangus	
		Hythie	
	South Ugie Water	Cuttyhill	
		New Deer	
		Maud	
		Old Deer	
		Stuartfield	
	Water of Fedderate	Mintlaw	
		Longside	
		Bonnykelly	
		Oldwhat	
Burn of Ludquharn	Longside		
Ythan and Coastal	River Ythan	Ythanwells	
		Logie Newton	
		Kirkton of Auchterless	

Catchment	Watercourse	Settlement (or district)
		Mains of Towie
		Inverythan
		Fyvie
		Woodhead
		Methlick
		Ellon
		Waterton
		Kirkton of Logie Buchan
		Newburgh
	Tifty Burn	Tifty
	Fordoun Burn	Rothienorman
	Little Water	(Burneno)
	Black Burn	(Bellmuir, Gowanwell)
	Ebrie Burn	(Blackhill of Fortrie)
	Yowlie Burn	Mirton of Ardlethen
	Bronie Burn	Littlemill of Esslemont
		Pitmedden
		Udny Green
	Burn of Forvie	(Forvie)
	Tarty Burn	Tipperty
	Foveran Burn	Newburgh
Don	River Don	Strathdon
		Bellabeg
		Forbes Town
		Waterside
		Glenkindie
		Towie
		Kildrummy
		Bridge of Alford
		Montgarrie
		Alford
		Keig
		Pitfichie
		Monymusk
		Kemnay
		Burnhervie
		Port Elphinstone
		Inverurie
		Kintore
		Hatton of Fintray
		Cothall
	Allt Tuileach	(Dunandhu)

Catchment	Watercourse	Settlement (or district)
	Burn of Loinherry	Loinherry
	Cock Burn	Cock Bridge
	Delavine Burn	(Delavine)
	Burn of Tornahaish	(Tornashaish)
	Conrie Water	(Culfork)
	Ernan Water	(Glen Ernan)
	Water of Carvie	(Birkford)
	Water of Nochty	(Glen Nochty)
	Deskry Water	(Deskry)
	Water of Buchat	(Glen Buchat)
	Kindie Burn	(Pitcandlich)
	Socach Burn/Long Burn	(Culfork)
	Leochel Burn	Muir of Fowlis
	Suie Burn	Montgarrie
		Tullynessle
	Ton Burn	(Dalriach)
	River Urie	Inverurie
		Drimmies
		Inveramsay
		Pitcable
		Whiteford
		Mill of Carden
		Old Rayne
		Pitmachie
Dee	River Dee	Braemar
		Balnaut
		Easter Balmoral
		Bridge of Muick
		Ballater
		Dinnet
		Aboyne
		Kincardine O'Neil
		Banchory
		Crathes
	Geldie Burn	(Geldie)
	Bynack Burn	(Bynack)
	Derry Burn	(Glen Derry)
	Lui Water	(Glen Lui)
	Ey Burn	(Inverey)
	Corriemulzie Burn	(Linn of Corriemulzie)
	Quoich Water	(Glen Quoich)
	Clunie Water	Braemar
	Callater Burn	(Glen Callater)

Catchment	Watercourse	Settlement (or district)
	Feardar Burn	(Inver)
	Gelder Burn	Invergelder
	Girnock Burn	Littlemill
	River Gairn	(Glen Gairn)
	River Muick	(Glen Muick)
	Tullich Burn	Milton of Tullich
	Pollagach Burn	(Dinnet)
	Water of Tanar	(Glen Tanar)
	Burn of Canny	Bridge of Canny
	Water of Feugh	(Feughside)
		Strachan
	Bo Burn	(Crathes)
	Burn of Sheecho	Kirkton of Durris
Kincardine Streams	Bervie Water	Glenbervie
		Drumlithie
		Inverbervie
	West Burn of Builg	Drumtochy Forest
	Burn of Luchray	Drumtochy Forest
	East Burn of Builg	Drumtochy Forest
	Maxie Burn	Drumtochy Forest
	Forthie Water	(Candy)
	Cowie Water	Rickarton
		Stonehaven
	Cowton Burn	(Cowton)
	Carron Water	Kirkton of Fetteresso
		Stonehaven
	Burn of Muchalls	Bridge of Muchalls
		Muchalls
North Esk	River North Esk	Northwater Bridge
		Marykirk
	Luther Water	(Howe of the Mearns)
	Dowie Burn	(Howe of the Mearns)
	Cauldcots Burn	Fettercairn
	Black Burn	(Howe of the Mearns)
	Devilly Burn	(Howe of the Mearns)
	Ducat Water	(Howe of the Mearns)
	Burn of Balmakelly	(Howe of the Mearns)