REPORT TO: FLOOD ALLEVIATION SUB-COMMITTEE ON 21 APRIL 2010  
SUBJECT: MANAGING FLOOD RISK AT KINGSTON AND GARMOUTH  
BY: DIRECTOR OF ENVIRONMENTAL SERVICES  

1 REASON FOR REPORT  
1.1 To ask the Sub-Committee to note the recent history regarding flood risk management in the lower reaches of the River Spey and Spey Bay, and to ask the Sub-Committee to agree to the proposed actions.  
1.2 The report is submitted to the Sub-Committee in terms of Section G (20) of the Council's Administrative Scheme relating to the functions of the Council under the Flood Prevention (Scotland) Act 1961 as amended by the Flood Prevention and Land Drainage (Scotland) Act 1997.  

2 RECOMMENDATIONS  
2.1 It is recommended that the Sub-Committee agree to:-  
   i. note the recent flood history in the lower reaches of the River Spey;  
   ii. work with SEPA to improve flood warning and emergency response, and also with Scottish Water to increase awareness of flood risk;  
   iii. investigate the feasibility and outline business case for flood protection measures for seven properties and Kingston Road in Garmouth that could be implemented once Part 4 of the Flood Risk Management (Scotland) Act 2009 is in force; and  
   iv. continue to work with riparian owners and local representatives to identify together how flood risk and other interests can be managed.  

3 BACKGROUND  
3.1 On 24 February 2010 this Sub-Committee:-  
   i. Recommended to the Planning & Regulatory Services Committee, as Planning Authority, that it considers placing a moratorium on new development in the flood plain north of Fochabers until Flood Risk is reassessed;  
   ii. recommended to the Council, in consultation with SEPA, that the trigger points when public warning is given be re-examined and what action should be taken;  
   iii. invited SEPA to look at the flood risk and assess whether or not this has changed due to recent erosion and report back to the appropriate Committee of the Council;  
   iv. agreed that once the position of riparian owner is clarified a meeting be arranged to discuss their riparian obligations  
   v. noted the current position regarding flood risk at Kingston and Garmouth;
vi. noted that there is no allowance in the Capital Plan to develop a scheme for Garmouth;

vii. noted that the Council will work with riparian owners and local representatives to identify together how flood risk and other interests can be managed;

viii. noted that a meeting is to be arranged with the local contractor to discuss his proposal and that a report thereon will be submitted to a future meeting of the appropriate Committee of the Council; and

ix. remit it to the Clerk to the Sub-Committee to ascertain the decision of the Council meeting on 20 January 2010 and advise members of the Sub-Committee and to seek to obtain a copy of the DVD, referred to during discussion, for circulation to the Sub-Committee.

3.2 The above was in response to a report that described the issues surrounding flood risk from the River Spey at Garmouth and the sea at Kingston. The report summarised previous studies by Aberdeen University, and Consultants Jacobs (previously Babtie or Dobbies) and Royal Haskoning.

**Garmouth**

3.3 There is a broad consensus in these reports that it might be possible to reduce the frequency of flooding to those parts of Garmouth at risk, or take measures to reduce impact of flooding.

3.4 There is an equally broad consensus that the implementation of a scheme that provides protection to a 1 in 200 return period would be uneconomic, i.e., costs would exceed the value of properties protected.

3.5 Royal Haskoning’s report of November 2007 considered a full 1 in 200 year standard scheme (i.e., to meet Government funding criteria at that time) to be uneconomic. However it suggested: -

- Progressive retreat from the floodplain
- Improved flood warning
- Control flood plain development
- Removal of properties from the floodplain
- Flood-proofing properties
- Enhanced emergency planning
- Community education

3.6 Environmental Services Committee considered the above study on 20 February 2008 (para 19 of the Minute refers) and agreed that the Council should not progress a scheme at this time. Instead, the position would reviewed in the context of proposed new flooding legislation and any changes in funding arrangements. It was anticipated that a lower return period scheme might be possible without requiring a flood prevention order or the like. The Flood Risk Management (Scotland) Act 2009 (the Act) is now in force, other than Part 4 – Local Authority Functions, which is expected to come into force around September 2010. Once Part 4 is in force the Council could take physical flood protection measures without an Flood Protection Order with landowner agreement. Other consents and approvals remain. As does the
Council's duty of Best Value where benefits of any investment should exceed cost.

3.7 The Financial Plan Review approved by the Moray Council on 11 February 2010 included a sum £300,000 for the three years from April 2011 for floods alleviation schemes requiring further investigation. There are a number of options for reducing flood risk at Garmouth and these are discussed below.

**Progressive Retreat/Removal of Properties**

3.8 Royal Haskoning’s report of November 2010 placed the number of properties at risk in Garmouth at nine, of which six are residential. It may be unrealistic to protect some or all of these properties, so a retreat from the floodplain is a valid option to pursue. It is questionable whether the Council should fund this measure. Retreating from the floodplain does not address the regular severing of access to Kingston during floods.

**Improved Flood Warning and Emergency Planning**

3.9 Improving flood warning does little to reduce the chance of flooding, but it provides residents, businesses and emergency services more time to put in place measures to reduce the impact of flooding. SEPA is considering improved flood warning infrastructure for this area and will launch Floodline Warnings Direct next year – an active rather than passive system.

**Controlling Flood Plain Development**

3.10 Controlling development on the floodplain so that no new properties are put at risk, and ensuring that other development on the floodplain does not increase risk elsewhere is a key component of flood risk management.

**Flood-Proofing Properties**

3.11 Property owners may take measures both to protect their asset from the ingress of floodwaters and to make properties more resilient to floodwaters. The former includes flood barriers, floodwalls, pumps, raising accesses and the like, while the latter typically includes using water resistant materials, non return valves on wastewater systems and raising electrical wiring above flood levels. The Council can assist people with advice on these topics. It would be unusual for a Council to offer to fund these measures to protect private assets.

**Community Education**

3.12 A more appropriate term is “raising awareness”. The Council has a duty under the Act to raise awareness of flooding. In communities, this can include a wide range of activities so that people are more conscious of overall flood risk and know what to do to reduce that risk.

**Flood Protection Measures**

3.13 A number of meetings and site visits in recent months have informed options for measures to reduce flood risk. Officials attended a public meeting on the evening of 15 January 2010 convened by Angus Roberson MP and Richard Lochhead MSP. SEPA, SNH and Crown Estates also attended. This prompted a meeting of the Lower Spey Forum on 22 February 2010.
3.14 Angus Robertson MP, together with the constituency and list MSPs, Ward Members, the Chair, SNH, SEPA and local representatives were invited to a meeting on Friday 19 February 2010.

3.15 Managing flood risk is a riparian owner duty. The Council wrote to Crown Estates asking for any information they had regarding land ownership. Following a reminder that there had been no response, Crown Estates stated that they were conducting a search and would reply by Friday 9 April 2010. At time of writing this report no response has been received.

3.16 As agreed at the aforementioned meeting of the Lower Spey Forum, that in turn led to a site visit with Mr Colin Murray, a contractor and local resident who suggested measures costing £150,000 to reduce flood risk. SEPA and SNH also attended and Mr Murray conducted a tour of the lower Spey and explained his proposals.

![Figure 1 – Lower Spey – Proposal to move shingle bank](image)

3.17 The meeting was very helpful and Colin Murray showed us what he proposed and why. His proposal, illustrated in Figure 1 above involves moving considerable quantities of shingle below the viaduct, and place it adjacent to Queenshaugh, to encourage the River to adopt a more easterly course. He believed the effect would be to reduce erosion at Queenshaugh and therefore flood risk to Garmouth.

3.18 The Consultancy Manager’s view was that there was no evidence to support the opinion these measures would have the desired effect for any length of time. SEPA’s geomorphologist considered that the recent armouring of the east bank upstream would tend to increase erosion of the west bank downstream, i.e., the River is inclined to erode that area at this time and the shingle is likely to be re-mobilised in future spates and deposited downstream. Mr Murray was unable to give assurances that his proposal would work,
especially in the longer term. There is also the risk of transferring erosion to the east bank.

3.19 While Mr Murray’s proposal might have a beneficial impact in the short term at Queenshaugh, but lower parts of Garmouth would remain at flood risk. In the longer term the shingle moving exercise would likely have to be repeated.

3.20 The Consultancy Manager could not recommend that the Council invest £150,000 without confidence it would reduce overall flood risk. SEPA agreed to consider whether this work would be consentable under the Controlled Activities Regulations (CAR) 2005. It would require a complex licence(s) and the time taken for that is usually about 6 months including advertising in the press. The cost of studies to support the licence application and future monitoring by SEPA would consume a large part of the suggested £150,000. The licence fee would be £2,801, and monitoring licence fees £18,000 per annum for three years, i.e., a total of £56,801.

3.21 SEPA were unable to be more specific regarding whether, or on what conditions a CAR licence might be granted but hope to be able to advise the Council prior to the meeting so that Members may be updated orally.

3.22 Melting snow and further rains in the upper catchment led to further flooding on several occasions during March and early April 2010. Properties in Garmouth flooded and the access to Kingston was severed on each occasion for varying periods of time up to two days, and for total of five days this year. During these periods the access was taken without any formal agreement via Cadgers Road – a 1.2km part private access, part private unadopted road to the Innes Road west of Garmouth that is in poor condition. The Council does not promote the use of this road.

3.23 SEPA indicate that the recent flood events and flows are follows:

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The table, based on the gauging station at Boat o’ Brig, indicates the recent flood history for the River Spey. Normally only one such event would be expected in any one year, but there have been eight in as many months.

3.24 Flooding in the area poses a risk to six residential and three other properties and cuts off access to Kingston. Measures to address these issues are being
investigated and at this stage only indicative appraisals are possible. The options considered are described below.

**Upgrade Cadgers Road to Adoptable Standard**

3.25 This would involve road construction to an appropriate standard and possibly a bridge/culvert replacement. The main risk would be land acquisition or entry. This option addresses the issue of access to Kingston in times of flooding from the River Spey and from the less frequent tidal flooding, but not property flooding. The cost is likely to be in the range £600,000 - £800,000, the estimate (from Morriston Construction) based on very general rates and a number of assumptions. The Roads Maintenance Manager has provided a more slightly more detailed outline estimate of £750,000.

**Floodwall or Embankment at Garmouth**

3.26 This involves a flood barrier running from the Kingston Road at the golf course access road southwards, to the east of properties and west of the Black Burn, linking into the high ground to the south. The standard of protection achievable is uncertain but there is a reasonable prospect of it being sufficient to protect against any recent events. Feasibility is uncertain and requires further study to determine the defence height, confirm that the measures would work, their impacts, and to assess cost and risks in more detail to inform an investment decision. The barrier would comprise a floodwall, probably encased in an embankment for some or all of its length of around 400m, so that the defence will resist erosion if and when it is overtopped. This option has the potential to reduce flood risk to seven properties and the Kingston Road (which will still flood infrequently for short periods during exceptional tidal conditions). The estimated cost of this option is in the range £400,000 - £600,000. A scheme may depend on landowner agreement.

3.27 Neither Ross House at Queeshaugh nor the Golf Clubhouse would be protected by either of the above measures.

**Kingston**

3.28 The Council continues to monitor the shingle bank protecting Kingston. The most recent monitoring indicates a slight gain of material over the last three months. The *Appendix* contains details of monitoring. More comprehensive monitoring, including regular aerial photography and full topographic survey of the entire shingle bank and spit is planned.

3.29 After last monitoring report, the east end of the shingle spit suffered damage when there was a coincidence of a very high spring tide, a strong onshore wind and low atmospheric pressure. The height of the crest is reduced over a length of approximately 25m is now some 1.5m lower, but remains well above high tide level. The damage does not pose a significant risk to properties in Kingston but the spit will be inspected visually more often to determine whether there is any further damage or indeed it accretes more shingle and repairs itself.

4 **SUMMARY OF IMPLICATIONS**
ITEM:
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(a) **Single Outcome Agreement/Service Improvement Plan**

(i) Promoting flood alleviation schemes is Local Priority 7 in the Single Outcome Agreement. This is relevant to National Outcome 12 – “We value and enjoy our built and natural environment and protect it and enhance it for future generations”.

(ii) The Corporate Development Plan 2004 – 2007 states that providing effective flood alleviation schemes is a priority, and the Community Plan reiterates this. The Departmental Service Improvement Plan sets out targets for the schemes.

(b) **Policy and Legal**

There are a number of legal issues involved in promoting measures to reduce flood risk to these communities. The Council cannot carry out works other than maintaining or cleansing watercourses without a Flood Prevention Order under the Flood Prevention (Scotland) Act 1961, which remains in force until Part 4 of the 2009 Act is implemented.

(c) **Resources (Financial, Risks, Staffing and Property)**

There is no allowance in the Capital Plan for works at either location. However there is an allowance for 2012/13 and 2013/14 for flood alleviation schemes requiring further development. Staff costs of further studies will be absorbed within the existing budget. However there is no budget for any other costs, such as ground investigation or consultants fees.

(d) **Consultations**

Lorraine Paisey, Principal Accountant, has been consulted and contributed to the financial aspects of resource implications above. Alasdair McEachan, Principle Solicitor, (commercial and Conveyancing has been consulted and is in agreement with the report. The Head of Direct Services/Emergency Planning Officer has been consulted and is in agreement with the report. The Roads Maintenance Manager has been consulted and is in agreement with the report.

5 **CONCLUSION**

5.1 Under the Act, the Council’s duty to manage overall flood risk means addressing both the likelihood of flooding and its impact. Royal Haskoning’s report of November 2007 recommended several non-
structural means of reducing flood risk and it is concluded that the Council should:

i. work with SEPA to improve emergency response;
ii. encourage home owners to protect themselves and/or improve flood resilience;
iii. in collaboration with SEPA and Scottish Water, increase public awareness of flood risk; and
iv. consider measures to reduce risk to Garmouth and severance of the only public access to Kingston.

5.2 Evidence indicates that flood protection measures to Garmouth are more likely to be better value for money to the Council than upgrading and adopting Cadgers Road to provide an alternative access to Kingston during flood events.

5.3 The Council should, within existing budget allocations, investigate flood protection measures for Garmouth as described in 3.21 above, and undertake an outline business case for measures that could be implemented once Part 4 of the Act is in force.

5.4 The Council should continue to work with riparian owners and local representatives to identify together how flood risk and other interests can be managed.

Author of Report: Consultancy Manager
Background Papers: Ref: A01.16.04