Public Document Pack

SCOTTISH BORDERS COUNCIL
THURSDAY, 27 AUGUST, 2015

A MEETING of the SCOTTISH BORDERS COUNCIL will be held in the COUNCIL CHAMBER, COUNCIL HEADQUARTERS, NEWTOWN ST. BOSWELLS on THURSDAY, 27 AUGUST, 2015 at 10.00 AM

J. J. WILKINSON,
Clerk to the Council,
20 August 2015

	BUSINESS	
1.	**Scottish Borders Violence Against Women Partnership Awards 2015** Launch of the new Awards developed to recognise the commitment and excellent work of individuals in communities who have made a significant contribution addressing violence against women/girls in the Scottish Borders.	5 mins
2.	**Convener's Remarks.**	
3.	**Apologies for Absence.**	
4.	**Order of Business.**	
5.	**Declarations of Interest.**	
6.	**Minute** Consider Minutes of Meetings of Scottish Borders Council held on:- 25 June 2014 *Pages 1-10*	2 mins
7.	**Committee Minutes** Consider Minutes of the following Committees:- (a) Police, Fire & Rescue and Safer Communities Board 15 May 2015 *Pages 11-18* (b) Cheviot Area Forum 3 June 2015 *Pages 19-28* (c) Scrutiny 11 June 2015 *Pages 29-32* (d) Community Planning Strategic Board 11 June 2015 *Pages 33-40* (e) Local Review Body 15 June 2015 *Pages 41-58* (f) Lauder Common Good Fund 16 June 2015 *Pages 59-60* (g) Teviot & Liddesdale Area Forum 16 June 2015 *Pages 61-66* (h) Pension Board 18 June 2015 *Pages 67-68*	5 mins

	(i) Pension Fund 18 June 2015 *Pages 69-74* (j) Civic Government Licensing 19 June 2015 *Pages 75-76* (k) Health & Social Care Joint Integration Board 22 June 2015 *Pages 77-82* (l) Peebles Common Good Fund 25 June 2015 *Pages 83-86* (m) Selkirk Common Good Fund 25 June 2015 *Pages 87-88* (n) Planning & Building Standards 29 June 2015 *Pages 89-98* (o) Audit & Risk 30 June 2015 *Pages 99-108* (p) Civic Government Licensing 24 July 2015 *Pages 109-110* (p) Planning & Building Standards 3 August 2015 *Pages 111-114* (Circulated in paper format only – electronic version can be accessed under relevant committee.)	
8.	**Open Questions**	15 mins
9.	**Audit Committee Annual Report 2014/15** (Pages 1 - 8) Consider report by the Chief Officer Audit & Risk on the Audit & Risk Committee Annual Report 2014/15 which incorporates its annual self-assessment using the CIPFA Audit Committees Guidance. (Copy attached.)	10 mins
10.	**Flood Risk Management (Scotland) Act 2009** (Pages 9 - 64) Consider report by Service Director Commercial Services seeking approval of SEPA's Flood Risk Management Strategies, Prioritisation of Actions Version 4.0 as prepared by SEPA for delivery by the Council as part of the Flood Risk Management Planning Cycle 2016-2022. (Copy attached.)	10 mins
11.	**Review of Implementation of the Social Care (Self-Directed Support) Act 2013** (Pages 65 - 72) Consider report by Chief Social Worker on progress in implementing the duties of the Social Care (Self-directed Support) (Scotland) Act 2013 which came into force on 1 April 2014. (Copy attached.)	10 mins
12.	**Easter Langlee Landfill Site - Way Forward** (Pages 73 - 104) Consider report by Service Director Neighbourhood Services outlining the implications of the decision to terminate the contract with New Earth Solutions for the treatment of waste, on Easter Langlee Landfill Site and the proposed way forward. (Copy attached.)	10 mins
13.	**Standards Committee Membership** Consider appointment of Member to Standards Committee.	5 mins
14.	**Motion by Councillor Logan** Consider Motion by Councillor Logan in the following terms:- "The Scottish Borders Council instructs the Leader to write to the Scottish Government expressing concerns over its proposals for the River Tweed in their Wild Fisheries Review."	5 mins
15.	**Any Other Items Previously Circulated**	
16.	**Any Other Items the Convener Decides are Urgent**	

17.	**Private Business** Before proceeding with the private business, the following motion should be approved:- "That under Section 50A(4) of the Local Government (Scotland) Act 1973 the public be excluded from the meeting for the following items of business on the grounds that they involve the likely disclosure of exempt information as defined in the relevant paragraphs of Part 1 of Schedule 7A to the aforementioned Act."	
18.	**Minute** Consider private Section of Scottish Borders Council Meeting held on:- 25 June 2105 *Pages 115-118*	1 mins
19.	**Committee Minutes** Consider private sections of the Minutes of the following Committees:- (a) Scrutiny 11 June 2015 *Pages 119-120* (b) Pension Fund 18 June 2015 *Pages 121-122* (c) Civic Government Licensing 19 June 2015 *Pages 123-124* (d) Selkirk Common Good Fund 25 June 2015 *Pages 125-126* (e) Civic Government Licensing 24 July 2015 *Pages 127-128* (f) Planning & Building Standards 3 August 2015 *Pages 129-130*	2 mins
20.	**SB Cares Staff Terms and Conditions** Consider joint report by SB Cares Managing Director and the Chief Social Work Officer. (Copy to follow.)	10 mins

NOTES

1. **Timings given above are only indicative and not intended to inhibit Members' discussions.**

2. **Members are reminded that, if they have a pecuniary or non-pecuniary interest in any item of business coming before the meeting, that interest should be declared prior to commencement of discussion on that item. Such declaration will be recorded in the Minute of the meeting.**

Please direct any enquiries to Louise McGeoch Tel 01835 825005
email lmcgeoch@scotborders.gov.uk

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Audit & Risk Committee Annual Report 2014/15

Report by Chief Officer Audit & Risk

Scottish Borders Council

27 August 2015

1 PURPOSE AND SUMMARY

1.1 The purpose of this report is to provide all Members with the Audit & Risk Committee Annual Report 2014/15 which incorporates its annual self-assessment using the CIPFA Audit Committees Guidance.

1.2 It is important that the Council's Audit & Risk Committee fully complies with best practice guidance on Audit Committees to ensure it can demonstrate its effectiveness as a scrutiny body as a foundation for sound corporate governance.

1.3 The CIPFA Audit Committees Practical Guidance for Local Authorities and Police 2013 Edition (hereinafter referred to as CIPFA Audit Committees Guidance) includes the production of an annual report on the performance of the Audit & Risk Committee against its remit for submission to the Council. The Audit & Risk Committee Annual Report 2014/15 is appended to this report as Appendix 1 for consideration. This is the seventh such annual report and Scottish Borders Council continues to be a lead authority in adopting this best practice.

1.4 The Audit & Risk Committee carried out self-assessments of Compliance with the Good Practice Principles Checklist and Evaluation of Effectiveness Toolkit from the CIPFA Audit Committees Guidance during Informal Sessions on 23 March & 11 May 2015 facilitated by the Chief Officer Audit & Risk. The outcome of the self-assessments was a high degree of performance against the good practice principles though some areas of improvement were identified to enhance the effectiveness of the Committee.

1.5 The Audit & Risk Committee approved its Annual Report 2014/15 and associated self-assessments at its meeting on 30 June 2015.

2 RECOMMENDATIONS

2.1 I recommend that the Council:

a) Approves the Audit & Risk Committee Annual Report 2014/15 (Appendix 1) which incorporates its self-assessments using the CIPFA Audit Committees Guidance; and

b) Agrees that the Audit & Risk Committee Annual Report 2014/15 should be published on the Council's website.

3 BACKGROUND

3.1 It is important that the Council's Audit & Risk Committee fully complies with best practice guidance on Audit Committees to ensure it can demonstrate its effectiveness as a scrutiny body as a foundation for sound corporate governance.

3.2 The Chartered Institute of Public Finance and Accountancy (CIPFA) issued an updated guidance note Audit Committees Practical Guidance for Local Authorities and Police 2013 Edition (hereinafter referred to as CIPFA Audit Committees Guidance). It incorporates CIPFA's 2013 Position Statement: Audit Committees in Local Authorities and Police which sets out CIPFA's view of the role and functions of an Audit Committee.

3.3 The CIPFA Audit Committees Guidance includes the production of an annual report on the performance of the Audit & Risk Committee against its remit for submission to the Council. The Audit & Risk Committee Annual Report 2014/15 is appended to this report as Appendix 1 for consideration. This is the seventh such annual report and Scottish Borders Council continues to be a lead authority in adopting this best practice.

3.4 The Audit & Risk Committee carried out self-assessments of Compliance with the Good Practice Principles Checklist and Evaluation of Effectiveness Toolkit from the CIPFA Audit Committees Guidance during Informal Sessions on 23 March & 11 May 2015 facilitated by the Chief Officer Audit & Risk. The outcome of the self-assessments was a high degree of performance against the good practice principles. However it has identified some areas of improvement to enhance and fully demonstrate the effectiveness of the Audit & Risk Committee.

3.5 The following were identified as the key improvement actions:

- Formally obtain feedback on its performance from those interacting with the Committee;
- Monitor compliance and outcomes of the Committee's recommendation to apply Gateway Review and lessons learned to major projects and programmes;
- Enhance the Committee's review of the effectiveness of performance management arrangements; and
- Improve the Committee's scrutiny of arrangements for ensuring value for money.

Steps will be taken to consider the business of the Committee during 2015/16 to cover these themes.

3.6 The Audit & Risk Committee approved its Annual Report 2014/15 and associated self-assessments at its meeting on 30 June 2015.

4 IMPLICATIONS

4.1 Financial

There are no direct financial implications associated with this report.

4.2 Risk and Mitigations

(a) The role of the Audit & Risk Committee includes the high level oversight of the effectiveness of the Council's systems of internal financial control, internal control and governance, including risk management.

(b) There is a risk that the Audit & Risk Committee does not fully comply with best practice guidance thus limiting its effectiveness as a scrutiny body as a foundation for sound corporate governance. The completion of the annual self-assessment and identification and implementation of improvement actions as evidenced through this Annual Report will mitigate this risk.

4.3 **Equalities**

It is anticipated there will be no adverse impact due to race, disability, gender, age, sexual orientation or religious/belief arising from the work contained in this report.

4.4 **Acting Sustainably**

There are no direct economic, social or environmental issues with this report.

4.5 **Carbon Management**

There are no direct carbon emissions impacts as a result of this report.

4.6 **Rural Proofing**

This report does not relate to new or amended policy or strategy and as a result rural proofing is not an applicable consideration.

4.7 **Changes to Scheme of Administration or Scheme of Delegation**

No changes to the Scheme of Administration or Scheme of Delegation are required as a result of this report.

5 CONSULTATION

5.1 The Corporate Management Team, the Chief Financial Officer, the Monitoring Officer, the Chief Legal Officer, the Service Director Strategy and Policy, the Chief Officer HR, and the Clerk to the Council have been consulted on the report and any comments received have been taken into account prior to its consideration by Audit & Risk Committee 30 June 2015.

Approved by

Jill Stacey, Chief Officer Audit & Risk Signature .....

Author(s)

Name	Designation and Contact Number
Jill Stacey	Chief Officer Audit & Risk Tel: 01835 825036

Background Papers: Audit and Risk Committee self-assessments 2014/15 using CIPFA Good Practice Principles Checklist and Evaluation of Effectiveness Toolkit
Previous Minute Reference: Audit and Risk Committee 30 June 2015

Note – You can get this document on tape, in Braille, large print and various computer formats by contacting the address below. James Collin, Chief Executives Department can also give information on other language translations as well as providing additional copies.

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APPENDIX 1

SCOTTISH BORDERS COUNCIL
AUDIT & RISK COMMITTEE
ANNUAL REPORT FROM THE CHAIRMAN – 2014/15

This annual report has been prepared to inform the Scottish Borders Council of the work carried out by the Council's Audit & Risk Committee during the financial year. The content and presentation of this report meets the requirements of the CIPFA Audit Committees Practical Guidance for Local Authorities and Police 2013 Edition (hereinafter referred to as CIPFA Audit Committees Guidance) to report to full Council on a regular basis on the Committee's performance in relation to the terms of reference and the effectiveness of the Committee in meeting its purpose.

Meetings

The Audit & Risk Committee has met 6 times during the financial year which included meetings on 21 April, 24 June, 23 September, 10 November 2014, 19 January and 23 March 2015 to consider reports pertinent to the audit cycle. In line with best practice the meetings include an Informal Session, without Management present, to enable the members of the Committee to meet privately and separately with the external auditors and with the Chief Officer Audit & Risk to raise any matters with the auditors pertinent to the annual audit cycle of reporting. During the year an improvement action was implemented to 'Develop a structured work programme of Informal Sessions of Audit & Risk Committee' which was effective to align with the audit cycle.

The remit of the Audit & Risk Committee is to have high level oversight of the Council's and the Pension Fund's framework of internal financial control, corporate governance, risk management systems and associated internal control environment. To fulfil this remit, it sought assurance on the adequacy and effectiveness of Council's and the Pension Fund's systems of corporate governance and internal control for efficient operations and for the highest standards of probity and public accountability. It did this through material it received from internal audit, external audit, other external scrutiny and inspection agencies, and assurances from Management. It focused entirely on matters of risk management, internal control and governance, giving specialist advice to the Council on the value of the audit process, on the integrity of financial reporting and on governance arrangements, and acted as a bridge between the Council and other stakeholders.

The Committee approved the terms of reference for Internal Audit (Internal Audit Charter) and annual and strategic internal audit plans. It considered Internal Audit's executive summaries of reports findings, audit opinions, good practice and recommendations and monitored their implementation. It monitored Internal Audit's performance including progress against the audit plan, and considered the Chief Officer Audit & Risk's annual report and assurance statement.

It also reviewed external audit plans and arrangements for effective liaison between external and internal audit, considered external audit reports including the annual report to Members and the Controller of Audit on the annual audit of the Council and of the Pension Fund, reviewed the main issues arising from the external audit of the Council's statutory accounts and those of the Pension Fund, and monitored the implementation of agreed actions arising from external audit reports.

The Committee considered the effectiveness of the risk management process throughout the Council and specifically received a report on the outcomes of the Risk Management Review. It endorsed the recommended improvements to refine the risk management arrangements at the Council to ensure their ongoing effectiveness and recommended the revised Corporate Risk Management Policy for approval by the Council.

The Audit & Risk Committee undertook the scrutiny role for the development of future Treasury Management strategy prior to its presentation to Council for approval. It also received progress reports on the extent of compliance with the approved treasury management strategy and an analysis of the performance against the targets set. During the year it recommended the Treasury Management strategy and performance monitoring reports for Council approval.

The minutes of Audit & Risk Committee meetings were presented for approval by the Council, and referred any exceptional items to the Council in accordance with the remit.

Membership

The Membership of the Audit & Risk Committee is part of the approved Scottish Borders Council's Scheme of Administration (approved 20 November 2014) namely "Eight members, being six Members of the Council and two members appointed from an external source. The Council Members shall comprise six Members not on the Executive Committee (4 from the Administration and 2 from the Opposition)". This structure complies with best practice on independence as evidenced through the use of the Checklist from the CIPFA Audit Committees Guidance for the assessment of the Audit & Risk Committee. The Audit & Risk Committee continues with two non-voting external members appointed from the community following a recruitment and selection process carried out during 2012. This ensures that the Audit & Risk Committee's role in the scrutiny process of internal controls and governance is fully objective.

The Committee membership during the year included Councillor M Ballantyne (Chairman), Councillor W Archibald, Councillor J Campbell, Councillor A Nicol, Councillor S Scott (Appointed in June 2014), Councillor W White, Mr D Gwyther, and Mr G Tait.

The attendance by each member at the Committee meetings throughout the year was as follows:

Member	Meeting of 21 April 2014	Meeting of 24 June 2014	Meeting of 23 September 2014	Meeting of 10 November 2014	Meeting of 19 January 2015	Meeting of 23 March 2015
Councillor M Ballantyne (Chairman)	Attended	Attended	Attended	Attended	Attended	Attended
Councillor W Archibald	Attended	Apologies Received	Apologies Received	Apologies Received	Attended	Apologies Received
Councillor J Campbell	Attended	Attended	Attended	Attended	Apologies Received	Attended
Councillor A Nicol	Attended	Attended	Attended	Apologies Received	Attended	Attended
Councillor S Scott	n/a	n/a	Attended	Attended	Attended	Apologies Received
Councillor W White	Apologies Received	Apologies Received	Attended	Apologies Received	Attended	Attended
Mr D Gwyther	Attended	Attended	Attended	Attended	Attended	Attended
Mr G Tait	Attended	Attended	Apologies Received	Attended	Attended	Apologies Received

Every meeting of the Audit & Risk Committee in 2014/15 was quorate (i.e. at least three elected members present).

All other individuals who attended the meetings are recognised as being "in attendance" only. The Chief Financial Officer, the Chief Officer Audit & Risk, and external auditors attend all Committee meetings, and other senior officers also routinely attend Committee meetings. The Democratic Services section has provided support and resources to the Committee throughout the year including a Committee Officer as the minute secretary.

Skills and Knowledge

Given the wider corporate governance remit of Audit & Risk Committees within local government and the topics now covered by the external and internal audit functions, it is noteworthy that there is a range of skills, knowledge and experience that Audit & Risk Committee members bring to the committee, not limited to financial and business management. This enhances the quality of scrutiny and discussion of reports at the meetings. No one committee member would be expected to be expert in all areas.

During the year an improvement action was implemented by Chief Officer Audit & Risk to 'Carry out a formal assessment with Audit & Risk Committee Members against the Knowledge and Skills Framework within CIPFA Audit Committees Guidance' which was effective in identifying their needs and applying the methods to enhance their knowledge.

Briefings and seminars have been delivered to help committee members keep up to date or extend their knowledge as part of the Informal Sessions or Committee business. On his appointment to the Committee, Councillor Scott attended an Induction session delivered by the Chief Officer Audit & Risk covering Corporate Governance, role of Audit & Risk Committee, roles of Internal and External Audit, Assurance requirements, Audit Cycle, and Risk Management**.**

Self-Assessment of the Committee

The annual self-assessment was carried out by members of the Audit & Risk Committee on 23 March and 11 May 2015 during Informal Sessions facilitated by the Chief Officer Audit & Risk using the Good Practice Principles Checklist and Evaluation of Effectiveness Toolkit from the CIPFA Audit Committees Guidance. The latter Toolkit was used for the first time - an improvement action - which was useful for Members to ensure the Committee can demonstrate its effectiveness as a scrutiny body as a foundation for sound corporate governance.

The outcome of the self-assessments was a high degree of performance against the good practice principles. However it has identified some areas of improvement to enhance and fully demonstrate the effectiveness of the Audit & Risk Committee.

The following were identified as the key improvement actions:

- Formally obtain feedback on its performance from those interacting with the committee;
- Monitor compliance and outcomes of the Committee's recommendation to apply Gateway Review and lessons learned to major projects and programmes;
- Enhance the Committee's review of the effectiveness of performance management arrangements; and
- Improve the Committee's scrutiny of arrangements for ensuring value for money.

Assurance Statement to the Council

The Audit & Risk Committee provides the following assurance to the Council:

- The Council has received the minutes of the Audit & Risk Committee throughout the year.
- The Audit & Risk Committee has operated in accordance with its agreed terms of reference, and accordingly the Audit & Risk Committee principles in CIPFA Position Statement.

- The Audit & Risk Committee has received and considered material arising from individual internal audit assignments in the form of executive summaries of internal audit reports and has received the Internal Audit Annual Report 2014/15 from the Chief Officer Audit & Risk at its 11 May 2015 meeting, whose approved plan of internal audit work covers all strands of governance, namely financial, staff and other resources. The Chief Officer Audit & Risk commented positively on the Council's governance framework and, based on the internal audit work completed, provided an independent and objective opinion on the adequacy and effectiveness of internal controls that have been in place during the year and highlighted areas for improvement.
- The Audit & Risk Committee has received and considered all material arising from the external audit strategies and plans for Scottish Borders Council and for Scottish Borders Pension Fund from the External Auditor, KPMG.
- For all audit reports, the Audit & Risk Committee is satisfied that an adequate management response is in place and action will be taken to address areas of improvement. The Committee acknowledges that all the audit recommendations are input to Covalent, the Council's performance management system, and that there is a system of ongoing follow-up in place to monitor implementation. The Committee received regular updates in this regard from relevant Service Directors and Managers.
- The Audit & Risk Committee has received and considered material to fulfil its oversight role on the management of risks across the Council. It will monitor the implementation of the recommended improvements, which it endorsed, to refine the risk management arrangements of the Council to ensure their ongoing effectiveness, and hold Management to account on the application of the revised Corporate Risk Management Policy.
- The Audit & Risk Committee has received and considered material to fulfil its scrutiny role on treasury management activity. Members took part as a focus group within an Audit Scotland national study on Treasury Management whose findings are included in the report 'Borrowing and treasury management in Councils' published in March 2015 which highlights the Council as best practice.
- The Audit & Risk Committee has reviewed the draft Annual Governance Statement 2014/15 at its meeting on 11 May 2015, in order to assess whether the content is consistent with its evaluation of the internal control environment based on evidence received to date. The Audit & Risk Committee will continue to monitor progress with implementation of the actions identified by Management to improve internal controls and governance arrangements as outlined in the Annual Governance Statement 2014/15.
- The Audit & Risk Committee has reviewed the Annual Accounts 2014/15 in draft of the Council and of the Pension Fund at its meeting on 30 June 2015 and will review these in final at its meeting on 28 September 2015 alongside External Audit reports on their annual audits 2014/15 in order to decide whether to recommend to the Council that they be adopted.
- The Audit & Risk Committee has reflected on its performance, identified improvements in respect of its scrutiny and challenge role, and agreed the steps to be taken to enhance its effectiveness going forward.

Recommendation of the Terms of Reference for the Audit & Risk Committee for the coming year

There are no proposals to change the Terms of Reference for the Committee at this time.

Councillor Michelle Ballantyne
Chairman of Audit & Risk Committee
June 2015

FLOOD RISK MANAGEMENT (SCOTLAND) Act 2009 APPROVAL OF SEPA FLOOD RISK MANAGEMENT STRATEGIES, PRIORITISATION OF ACTIONS VERSION 4_ DRAFT

Report by Service Director Commercial Services

SCOTTISH BORDERS COUNCIL

27 August 2015

1 PURPOSE AND SUMMARY

1.1 **This report seeks approval of SEPA's Flood Risk Management Strategies, Prioritisation of Actions Version 4.0 as prepared by SEPA for delivery by the Council as part of the Flood Risk Management Planning Cycle 2016-2022.**

1.2 Scottish Environment Protection Agency (SEPA) has a statutory function to prioritise actions in the Flood Risk Management (FRM) Strategies across Scotland. This function is set out in section 27 and Schedule 1, Part 1 of the Flood Risk Management (Scotland) Act. As part of this function, SEPA has indicated the priority given to each action and identified the appropriate planning cycle for implementation.

1.3 SEPA has identified the following actions to be taken forward by Scottish Borders Council in the Flood Risk Management Planning Cycle 1 2016 - 2022. These are listed below.

1.4

Flood Protection Schemes	**Estimated Cost**
Hawick FPS	£30m
Flood Studies	
Eyemouth *(Coastal Protection Scheme)* Flood Study	£120k
Peebles, Innerleithen & Broughton *(Flood Protection Scheme)* Flood Study	£200k
Earlston *(Flood Protection Scheme)* Flood Study	£90k
Newcastleton *(Flood Protection Scheme)* Flood Study	£25k
Jedburgh *(Jed Water) (Flood Protection Scheme)* Flood Study	£110k *(Proposed for Delivery Cycle 2022 – 2028)*
Bonchester Bridge *(Flood Protection Scheme Flood)* Study	£60k *(Proposed for Delivery Cycle 2022 – 2028)*

Natural Flood Management Studies	
Gala Water – NFM Study	£30k
River Teviot – NFM Study	£30K
Surface Water Management Plans	
Galashiels, Melrose, Tweedbank	60k
Hawick	20k
Peebles	30k
Newcastleton	15k
Jedburgh	15k *(Proposed for Delivery Cycle 2022 – 2028)*
Kelso	15k *(Proposed for Delivery Cycle 2022 – 2028)*
Improved Understanding	
Eyemouth Coastal	*This action will be taken forward by SEPA*

1.5 All of the above Scheme and Studies are subject to Scottish government funding, the mechanism for the allocation of funding is still currently under development with this to be finalised in September.

1.6 There is a high degree of confidence that the funding allocation for Flood Schemes will cover all 41 proposed schemes with Hawick Flood Protection Scheme ranked number 15 nationally.

1.7 There is now a need to obtain the Council's approval of SEPA's Prioritisation of Actions Version 4.0_DRAFT prior to SEPA gaining internal approval and taking the final Flood Risk Management Strategies which will include v4.0_FINAL of the Prioritisation of Actions to the Scottish Minister. *(Note: It is envisaged that there will be no changes to Scottish Borders Councils list of priorities in v4.0_FINAL Prioritisation of Actions)*

2 RECOMMENDATIONS

2.1 **I recommend that the Council approves SEPA's Flood Risk Management Strategies, Prioritisation of Actions Version 4.0_DRAFT as prepared by SEPA for delivery by the Council as part of the Flood Risk Management Planning Cycle 2016 -2022.**

BACKGROUND INFORMATION

3.1 The Flood Risk Management (Scotland) Act 2009 (FRM Act) requires the production of Flood Risk Management Plans covering each Local Plan District in Scotland.

3.2 There will be two sets of complementary plans: Flood Risk Management Strategies produced by the Scottish Environment Protection Agency (SEPA), and Local Flood Risk Management Plans produced by Lead Local Authorities.

3.3 The Lead Local Authority of each local plan district is responsible for leading the production, consultation, publication and review of the Local Flood Risk Management Plan.

3.4 There are 14 local plan districts in Scotland. Scottish Borders Council's area falls within 3 of these local plan districts which are Forth Estuary, Tweed, and Solway. Edinburgh City Council is Lead for the Forth Estuary, Scottish Borders Council is Lead for Tweed, and Dumfries and Galloway Council is Lead for Solway.

3.5 The Flood Risk Management Strategies will identify the main flood hazards and impacts, set out objectives for reducing flood risk and the best combination of actions to achieve the objectives. This will include a Prioritised List of Actions developed by SEPA in relation to Flood Protection Schemes and Works, Flood Studies (Flood Protection & Natural Flood Management), Improved Understanding and Surface Water Management Planning. Each action in these categories will be ranked at a National Level, Local Plan District (LPD) Level and Local Authority (LA) Level.

(See Appendix 1 - Prioritisation of Actions Version 4.0_DRAFT Flood Schemes and Works, Appendix 2 – Prioritisation of Actions Version 4.0_DRAFT & Appendix 3 Scottish Borders Council Prioritisation of Actions Delivery Plan)

3.6 The initial prioritisation was developed by SEPA using risk based assessment and the latest evidence base. This information was then discussed with each local authority to agree the initial ranking and where appropriate incorporate local priorities. The ranking for Flood Protection Schemes and Works was based on cost-benefit ratios supplemented with non-monetised information (i.e. non-economic impacts). Ranking for Flood Studies was based on Present Value Damages (PVD) supplemented with non-monetised information.

3.7 An independent group called the National Prioritisation Working Group (NPWG) advices SEPA on the priority of flood risk management actions and related strategic issues. The group is chaired by the Scottish Government and includes representation from COSLA, SEPA, local authorities and Scottish Water.

3.8 The prioritisation process results in 4 versions of the rankings being produced with each version subject to discussion by the NPWG with amendments and information requested as required. The final version, Version 4.0_FINAL will be produced by SEPA.

3.9 Following the finalisation of Version 4.0_FINAL, SEPA will complete the Flood Risk Management Strategies and submit them for internal approval within SEPA before issuing them to the Scottish Minister for approval in November 2015.

3.10 The Flood Risk Management Strategies for each of the 14 Local Plan Districts, taken together, will comprise the National Flood Risk Management Plan for Scotland. The Flood Risk Management Strategies will cover 3 six-year cycles.

3.11 The Local Flood Risk Management Plans will take the objectives and actions identified in the Flood Risk Management Strategies and set out what actions will be taken forward, by whom and when, to deliver the plan within a six-year cycle. The plan will also set the funding of agreed actions.

3.12 The Flood Risk Management Strategies and Local Flood Risk Management Plans will provide a framework for co-ordinating actions across catchments to deal with all sources of flooding. These plans will be used to ensure long term planning around flooding and future funding should take these into account. This will help to target investment in areas where there is the greatest risk of flooding and where communities can receive the greatest benefit. This will help maximise the benefit of public investment.

3.13 The first planning cycle will run from 2011 to 2016.

3.14 The first implementation cycle will run from 2016 to 2022.

3.15 The Flood Risk Management Strategies and Local Flood Risk Management Plans are being developed to be complementary through collaborative partnerships between Local Authorities, SEPA and Scottish Water.

3.16 In addition, the engagement and support of local and national advisory groups has been sought during the development of the Flood Risk Management Strategies and Local Flood Risk Management Plans.

4 IMPLICATIONS

4.1 Financial

(a) This report does not have any immediate financial implications with respect to developing the strategies and plans as funding is included in the Asset Management revenue budget.

(b) The prioritised lists of actions are all caveated with regards to the level and mechanism of funding given by the Scottish Government which is still to be agreed.

4.2 Risk and Mitigations

(a) There is a risk that the funding or funding mechanism from the Scottish Government impacts upon the delivery of the prioritised list of actions. There are no mitigation measures in place but a general acceptance by all parties involved that this will require to be addressed should funding be an issue.

(b) There is a risk that the list of prioritised actions in Cycle 1, 2016 - 2022 cannot be delivered by Local Authorities due to lack of resources both internally and externally. This is being mitigated by an exercise through the prioritisation process where Local Authorities are reviewing what can be delivered in Cycle 1.

4.3 **Equalities**

(a) Research has shown that the more vulnerable groups in society are more negatively impacted by flooding.

(b) Therefore the proposed strategies and plans which are aimed at reducing the risk of flooding and making people more prepared will have a beneficial effect on these vulnerable groups.

4.4 **Acting Sustainably**

The development of the strategies and plans which includes the list of prioritised actions is being undertaken as part of implementing the Flood Risk Management (Scotland) Act 2009 which has, as its core principle, the need to act sustainably.

4.5 **Carbon Management**

(a) Natural Flood Management actions provide opportunities for carbon management and are being considered under the Low Carbon Strategy initiative.

(b) There will be a carbon cost in the implementation of some actions but this should be offset by the benefits in reducing the impact of flooding.

4.6 **Rural Proofing**

It is anticipated there will be no adverse impact on the rural area from the proposals contained in this report.

4.7 **Changes to Scheme of Administration or Scheme of Delegation**

There are no changes required to either the Scheme of Administration or the Scheme of Delegation as a result of the proposals in this report.

5 CONSULTATION

5.1 The Chief Financial Officer, the Monitoring Officer, the Chief Legal Officer, the Service Director Strategy and Policy, the Chief Officer Audit and Risk, the Chief Officer HR and the Clerk to the Council have been consulted and any comments received have been incorporated into the final report.

5.2 Others to be consulted if required are –

- Corporate Equalities and Diversity Officer
- Communications

Approved by

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Background Papers:

1. Flood Study Scheme Prioritisation Programme (Executive – 2 September 2007)
2. Strategic Approach to Flood Prevention (Council – 21 February 2008)
3. Strategy for the Implementation of Flood Protection Schemes (Council – 24 June 2010)
4. Flood Risk Management (Scotland) Act 2009 – Approval of Draft Flood Risk Management Strategies to be published on 22 December 2014 for Public Consultation – 30 October 2014.

Previous Minute Reference:

1. Flood Risk Management (Scotland) Act - Draft FRM Strategies - Minute – 30 November 2014
2. Flood Risk Management (Scotland) Act - Draft FRM Plans - Minute – 19 February 2015

Note – You can get this document on tape, in Braille, large print and various computer formats by contacting the address below. Jacqueline Whitelaw can also give information on other language translations as well as providing additional copies.

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APPENDIX 1

Flood Risk Management (Scotland) Act

FRM Strategies – Prioritisation of Actions

Flood Protection Schemes and Works v4_DRAFT

Version Date: 10/08/2015

Rows highlighted in green have undergone a notable change since v3. These changes have resulted in some small changes to overall rankings

Location	Objective	Scheme Description	PV Scheme costs - (* indicates capital / undefined)	Economic Benefits	BCR	Non-Monetised Score	Ranking (evidence based)			Ranking (local preference) Reason	Proposed delivery Cycle	Scheme Status	LA Funding identified (if Yes, which years)	Supporting Text
							National	LPD	LA					
Falkirk Council **Grangemouth**	Reduce economic damages to residential and non-residential properties in Carron/Carronshore caused by flooding from the River Carron and coastal flooding. Reduce economic damages to residential and non-residential properties in Falkirk caused by flooding from the River Carron. Reduce economic damages to residential and non-residential properties in Grangemouth caused by river flooding and coastal flooding.	The Grangemouth Flood Protection Scheme aims to reduce flood risk in the Grangemouth area. It will include the River Carron, Grange Burn, River Avon and the River Forth Estuary shoreline. The works will include combination of new and enhanced defences in the form of flood walls and defences and possible upstream measures to attenuate flow. Standard of Protection: 200yr+CC	*£108m	PV Damages Avoided £6,044,319,668 1261 residential properties and 99 non-residential properties	58	5	1 Of 41	1 Of 7	1 Of 1	-	C1/2+	Preliminary stages Ongoing Flood Study completed in August 2012. Ground Investigation works ongoing. Option appraisal and development of preferred scheme commencing July 2015. Anticipated completion date is early 2018, with construction thereafter.	Yes, £2.4m identified within the Council's approved Three Year Capital Programme. This total includes the £1.7-£2.2m identified against the corresponding study action.	Grangemouth FPS has been evaluated a BCR of 4 with direct damages only, and 53 with the inclusion in indirect damages. This is due to the impact on National Critical Infrastructure (petrochemical / oil) Preliminary works to commence in 2015/16 with the major project spend of c.£108m extending beyond 2017/18. This spend is based on the assumption that substantial Council funding (c.£12m) and Scottish Government grant (c.£86m) will be provided together with TIF funding of (c.£10m).
Dundee City Council **Broughty Ferry**	Reduce economic damages to residential and non-residential properties and risk to people in Broughty Ferry caused by coastal flooding.	The scheme will include the construction of new sea walls, set back walls, dune replenishment and management and rock armour along the Broughty Ferry coastline. Standard of Protection: 200yr+CC	£9.9m	PV Damages Avoided £96.9m 450 residential and non-residential properties protected	9.8	7	2 Of 41	1 Of 4	1 Of 2	-	C1	Preliminary Stages Ongoing Preliminary stages Completion of the Coastal Study Stage 2 and approval to progress recommendations was reported to City Development Committee on 19/8/13.	Yes DCC Capital Plan 2015-2019 Spread 2015-2019	It is proposed that the Broughty Ferry scheme is implemented in several phases between 2016-2019. Phase 1 - B/Ferry Beach Dunes - implement in 2016/17 Detailed design complete August 2015 Phase 2 - Grassy Beach, Douglas Terrace New Sea Wall to Fisher Street Implement 2017/2018 Detailed design complete April 2016 Phase 3 - Fisher Street / Beach Crescent / Broughty Ferry Castle 2018/2019 Detailed design complete December 2016
Inverclyde Council **Inverclyde FPS - Glenmosston Burn**	Reduce the risk of Glenmosston Burn flooding to residential properties and non-residential properties in Kilmacolm.	The scheme will include upgrading a culvert at Market Place and a new overflow pipe at Gowkhouse Road. Standard of Protection: 75yr	£0.5m	PV Damages Avoided £5.1m Replacement of the culvert will prevent flooding to business premises and closure of arterial road. The new overflow will prevent the flooding of several residential properties by directing flood water back into watercourse.	10.18	1	3 Of 41	1 Of 7	1 of 4	-	C1 (2016)	Preliminary Stages Ongoing Design Tender Awarded wc 29/6/15 Expected Design programme 13/07/15-16/10/15	Yes 2016/2017	Detail design tender for these projects has just been awarded. Design is due to start 13 July. These are small pieces of work and detail design could be carried out relatively quickly. Glenmosston, Coves and Bouverie Burns were originally assessed as a single scheme, however they are on hydraulically separate watercourse and have since been separated.
Inverclyde Council **Inverclyde FPS - Coves Burn**	Reduce the risk of river / surface water flooding to residential properties and non-residential properties in Greenock.	The scheme will include a number of conveyance modification actions including: Construction of a new connection chamber and replacement and upgrade of existing culverts. Standard of Protection: 75yr	£0.4m	PV Damages Avoided £3.7m	9.97	2	4 Of 41	2 Of 7	2 Of 4	-	C1 (2016)	Preliminary Stage Ongoing Design Tender Awarded wc 29/6/15 Expected Design programme 13/07/15-16/10/15	Yes 2016/2017	Detail design tender for these projects has just been awarded. Design is due to start 13 July. These are small pieces of work and detail design could be carried out relatively quickly. Glenmosston, Coves and Bouverie Burns were originally assessed as a single scheme, however they are on hydraulically separate watercourse and have since been separated.

Flood Risk Management (Scotland) Act

FRM Strategies – Prioritisation of Actions

Flood Protection Schemes and Works v4_DRAFT

Version Date: 10/08/2015

Location	Objective	Scheme Description	PV Scheme costs - (* indicates	Economic Benefits	BCR	Non-Monetised Score	Ranking (evidence based)			Ranking (local preference) Reason	Proposed delivery Cycle	Scheme Status	LA Funding identified (if Yes, which	Supporting Text
Dundee City Council **Dundee**	Reduce economic damages to residential and non-residential properties in Dundee caused by coastal flooding.	Implementation of the flood protection works along the Dundee coastline. Section 1 from Dundee Airport to Discovery Point includes the construction of setback walls and earth bunds. Section 2 from Camperdown Dock to the Tay Road Bridge includes construction of set back walls and raising of existing walls. Standard of Protection:200yr + CC	£6.2m	West of rail bridge to airport BCR 2.2 PVDA £54.8m East of rail bridge to Stannergate BCR 35.8 PVDA £334m 200 residential and non-residential properties protected (1 in 200)	8.7	7	5 Of 41	2 Of 4	2 Of 2	-	C1	Preliminary Stages Ongoing Completion of the Coastal Study Stage 3 and approval to progress recommendations was reported to City Development Committee on 19/8/13 Detailed design forecast completion October 2015 Scheme to be notified January 2015 Forecast scheme completion September 2017 (March 2018 if valid objections)	Yes DCC Capital Plan 2015-2019 Spread 2015-2017	It is proposed that Dundee scheme is implemented in a single contract in 2016/17. The raising of the sea wall at the Central Waterfront is to be constructed in financial year 2015/16.
Orkney Islands Council **Kirkwall**	Reduce risk in Kirkwall from coastal flooding	Flood protection works have been designed to reduce the remaining risk of flooding in Kirkwall not covered by the existing defences. The works include the construction of direct defences to provide protection from medium likelihood floods, including the impacts from climate change. Standard of Protection:200yr + CC	£1.9m	PV Damages Avoided £15.1m Reduction in risk to 383 residential properties 158 non-residential properties currently at risk during 200yr event. Emergency services and utility sites could also benefit.	8.03	10	6 Of 41	1 Of 1	1 Of 1	-	C1 (2016)	Preliminary Stages Detailed design complete, expect to commence with notificaton in autumn 2015.	Yes 2016/2017 Funding originally allocated in 2015 carried over to allow promotion of a formal flood protection scheme	Scheme involves construction of defences around the perimeter of the harbour to provided 200yr plus climate change level of protection. A scheme with lower wall heights (200yr without cc) already has planning permission but Council seeking to upgrade to include Climate Change allowance. Significant increase in risk with climate change.
Perth & Kinross Council **Comrie**	Reduce economic damages to residential and non-residential properties in Comrie caused by flooding from the River Earn and River Lednock.	A 2010 study by Mouchel considered the combined flood risk from the Water of Ruchill, River Earn and River Lednock and recommended a scheme consisting of flood defences and flood storage areas. Standard of Protection: 100yr	*£11.2m	PV Damages Avoided £30.4m 382 residential properties and 15 non-residential properties at risk	6.7	8	7 Of 41	1 Of 2	1 Of 4	-	C1 (latter half)	Preliminary Stages Ongoing Flood study completed in 2010; Current work (to refine study) to be completed in December 2015; Current forecast completion for outline design development is December 2016. Notification: current forecast for scheme publication is June 2017.	No A business case is being submitted to the Council's Capital Programme for consideration in August 2015)	Emergency works costing just under £1M were completed in May 2013 following two severe flooding events on the Water of Ruchill in August and November 2012. The emergency works provide a 1:100 year standard of protection from the Water of Ruchill only, including an allowance for climate change. The wider flood risk from the River Earn and the River Lednock remains and no flood defences are in place to address this. The proposed scheme would manage this wider risk by providing the same 1:100 year standard of protection.
[illegible] Council **Kinness Burn**	Reduce economic damages to residential and non-residential properties in St Andrew's caused by flooding from the Kinness Burn. Reduce risk to people cause by flooding from the Kinness Burn.	Standard of Protection: 100yr (joint probability scenario)	£1.8m	PV Damages Avoided £10.6m	5.95	7	8 Of 41	3 Of 4	1 Of 1	-	C1	Preliminary Stages Ongoing Optioneering carried out in 2007 but further study is required to refresh and refine options	Partial Finances identified within the Climate Change budget for additional studies. The Capital Plans are reviewed yearly and it is envisaged funding allocation to be "set aside" within the next review period	Optioneering in 2007 has identified a cost-beneficial option, however subsequent berm works in the channel will require this to be revised and is likely to result in a change to cost and benefits.
Inverclyde Council **Inverclyde FPS - Bouverie Burn**	Reduce the risk of river / surface water flooding to residential properties and non-residential properties in Greenock.	Work should be progressed as per the Inverclyde Flood Protection Scheme. The work involves a number of conveyance and storage modification actions including: extension of the new bypass pipe; 3m ø pre-cast concrete chamber. Standard of Protection: 75yr	£0.4m	PV Damages Avoided £2.8m	6.25	3	9 Of 41	3 Of 7	3 Of 4	-	C1 (2016-17)	These are small pieces of work and detail design could be carried out relatively quickly.	Yes 2016/2017	Detail design tender for these projects has just been awarded. Design is due to start 13 July 2015

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North Ayrshire Council **Millport Coastal**	Reduce the risk of coastal flooding to residential properties and non residential properties in Millport.	The Millport Coastal Flood Risk Assessment (2015) has been completed along with an economic appraisal study of the options recommended in the FRA. The scheme is likely to involve creation of a breakwater with flood walls. It is also recommended that the council look at additional property level protection outlined in the study. Standard of Protection: mainly up to 200yr with one location of 25yr	£12.1m	Protection to 728 residential properties and a number of non-residential properties.	5.24	6	10 Of 41	1 Of 3	1 Of 3	2 Further work is required to develop options for this scheme, allowing others to be progressed first.	C1 (2017-2020)	Study has provided options and cost benefits for these options. The preferred option is to be determined.	No A report is currently being prepared for submission to Cabinet (August 2015) for approval to progress project and request appropriate funding.	
East Lothian Council **Musselburgh**	Reduce economic damages to residential and non-residential properties in Musselburgh caused by flooding from the River Esk and coastal flooding. Reduce risk to people in Musselburgh from flooding from the River Esk. Reduce economic damages to residential and non-residential properties in Musselburgh caused by flooding from the River Esk.	Scheme comprises elements of direct flood defences comprising relatively low (typically 1 to 1.5m) earth embankments and flood walls that would provide a 1:200 year standard of protection against extensive flooding of Musselburgh as a result of the interaction of high river flows in River Esk and high sea levels (due to tides, storm surges and waves). Standard of Protection: 1 in 200yr	£5.6m	PV Damages Avoided £29.6m 1489 residential properties and 417 non-residential properties at risk	5.29	4	11 Of 41	2 Of 7	1 Of 2	-	C1 (2017/2018)	Preliminary Stages Ongoing Flood Study Report to be completed July 2015 Forecast: Notification May 2016 Completion of Scheme March 2018	Yes 2017/2018 Funding available in current approved Capital Budget	A Flood Protection Study for Musselburgh is currently underway and due to report in summer 2015. Draft study outputs have been used to inform the prioritisation. The scheme would be implemented prior to 2021 (proposed for 2017/18 - subject to available funding Economic appraisal is based only on direct damages to properties. No indirect or social damages calculated, therefore BCR may be under-represented.
North Ayrshire Council **Upper Garnock FPS**	Reduce the risk of river / surface water flooding to residential properties and non-residential properties in Kilbirnie, Glengarnock and Longbar.	A study on the Upper Garnock Flood Protection Scheme has been carried out which has recommended a cost beneficial preferred action consisting of storage and direct defences based on up to a 100 year standard of protection. North Ayrshire Council is committed to progressing the scheme subject to available funding. Standard of Protection: Kilbirnie 100yr Dalry 50yr	£14.2m	PV Damages Avoided £61m 169 Residential and 32 Non-Residential properties identified as at risk of flooding during the 200 year event, in the Kilbirnie and Dalry scheme elements which will benefit.	4.3	6	12 Of 41	2 Of 3	2 Of 3	1 A priority for the LA due to the potential risk to people due to the depth and velocity of water predicted in the area.	C1 (2016-17)	Preliminary Stages Ongoing Flood study completed September, 2014. Public consultation undertaken in January, 2 015. Discussions with affected landowners ongoing. Final amendments and supplementary studies are being completed. Notification documents will be concluded during July, 2015, with formal advertisement of the notice taking place as soon as possible following Council approval (expected on 18 August, 2015) of the finalised scheme.	Yes This scheme is identified in the Council`s Capital Plan. The capital funding that has been allocated is adequate to cover the 20% contribution that would be required of North Ayrshire Council if the scheme is approved by the Scottish Government.	The quoted BCR of 4.3 includes a significant proportion of economic of damages attributed to risk to life. The scheme will not remove all risk to life in the area but will greatly reduce the risk. Flood warning is also planned for the area which will also reduce the risk to life. If risk to life is excluded then the BCR is reduced to 1.22

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Comhairle nan Eilean Siar **South Fords**	Reduce risk to south-west Benbecula from river and coastal flooding. Reduce risk to the area surrounding Loch Bi from river and coastal flooding.	Detailed design for works including embankments and beach management actions are currently progressing. Local authority approval to proceed to detailed design obtained and likely to seek formal approval in 2016. Standard of Protection:100yr+CC, locally 200yr+CC	£2.0m	The flood protection works would reduce risk to 58 properties which are estimated to be at risk during medium likelihood floods. The flood protection works would achieve an estimated £7,800,000 of benefits over 100 years. Note the natural approach to flood management which includes beach recharge and dune management requires high ongoing maintenance costs which are reflected in Present Value Cost used in Benefit / Cost justification	3.97	7	13 Of 41 | 1 Of 1 | 1 Of 1	-	C1 (2017 – 2018?)	Preliminary Stages Ongoing Detailed design stage to commence in 2015 with construction expected in 2017	Yes The funds are allocated within the authority's risk pot as a specific year for expenditure has not yet been confirmed.	Scheme involves combination of actions including construction of an embankment and shingle recharge to Gualan Island. Significant flood impacts on rural community including flooding to property, local facilities and transport links. Last major storm in 2005 led to 5 deaths as family attempted to escape flood. Significant increase in risk with climate change The Local Authority have undertaken detailed study and are progressing in parallel with design for a bridge option, creating gaps in the existing causeway. This has been taken forwards in conjunction with local community groups and discussions around viable funding opportunities outwith Flood Risk Management are being progressed with the Scottish Government.
Argyll & Bute Council **Campbeltown**	Reduce flood risk in Campbeltown from river flooding	Flood protection works in the form of storage on two burns plus a relief culvert to be taken forward for detailed design. Standard of Protection:200yr	£5.2m	The flood protection works would achieve an estimated £18,300,000 of benefits over 100 years.	3.49	10	14 Of 41 | 1 Of 4 | 1 Of 1	-	C1	Preliminary Stages Ongoing Detailed design not commenced. The capital costs will need to be increased for construction inflation over past 7 years.	No	Flood storage on two small burns plus a flood relief culvert are proposed. There has been a number of floods in Campbeltown in recent years including incidence of sewer flooding which the scheme partly contributes to reducing.
Scottish Borders Council **Hawick**	Reduce economic damages to residential, non-residential and community properties and risk to people in Hawick caused by flooding from the River Teviot.	A series of walls (set back where possible) and embankments to provide protection to six flood cells spanning the length of the Teviot within the town, additionally including flood proofing to specific identified buildings and provision for storage and pumping of seepage flows. Preferred option utilises some existing walls: an alternative preferred scheme with new walls / embankments throughout has also been considered. Standard of Protection: 75yr	£29.2m	PV Damages Avoided £45.2m 683 residential and 233 non-residential properties at risk. Cost benefit ratio 1:2.88 to 1:3.03 depending on whether existing walls can be re-used (CBR to be confirmed once detailed design has been carried out).	2.88	10	15 Of 41 | 1 Of 1 | 1 Of 1	-	C1 (2018-22)	Preliminary Stages Ongoing The following already undertaken: Option Appraisal and Preferred Scheme Economic Assessment October Ground Investigation Preliminary Ecological Survey Topographical and Geophysical Surveys The following currently ongoing: Environmental Scoping and Screening Project Management Plans The following are forecast: Notification Q2 2017 Confirmed Scheme Q4 2017 Scheme commencement Q4 2019 Scheme completion Q4 2021	Yes Spread 2015-2021	Contract to develop scheme recently awarded: outline design to approval, and assuming approval and funding granted through to construction. Extensive hydrological modelling and option assessment undertaken. The Preferred Scheme was presented at a Public Exhibition in July 2012, and proposals were generally accepted. Hydrological update and environmental screening / scoping commenced. Further stakeholder engagement planned. Proactive invasive species control to begin Two options progressed to account for potential existing wall re-use. The lower BCR has been used in prioritisation, however they are close and using the greater is unlikely to affect ranking significantly.
Angus Council **Arbroath**	Reduce economic damages to residential and non-residential properties in Arbroath caused by flooding from the Brothock Water. Reduce risk to people in Arbroath from river flooding.	Flood Protection Strategy for Abroath identified fluvial and coastal actions to reduce flood risk. The proposed fluvial flood protection works will address flood risk from the Brothock Water and include improvements to direct flood defences and the construction of 2 flood storage areas. Standard of Protection: 200yr	*£5.6m	PV Damages Avoided £16.3m	2.89	8	16 Of 41 | 4 Of 4 | 1 Of 1	-	C1 (2016)	Preliminary Stages Ongoing The scheme has not completed the notification stage The works/Scheme has been subject to specific approval (reference Report 49/12). The works/Scheme has completed the design stage. Procurement is forecast to be complete by June 2016 and commencement is due in July 2016. The works/Scheme will be 100% completed within the first planning cycle, in 2017.	Yes The works/Scheme has been identified in Angus Council financial plan (reference Report 59/15).	The Arbroath Flood Protection Strategy also identified a coastal risk related to wave overtopping that may result in safety issues to pedestrians, vehicles and property. The identified coastal actions will be implemented in a phased manner by Angus Council.

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Dumfries & Galloway Council **Dumfries/ River Nith/ Whitesands FPS**	Reduce the risk of river flooding to properties in Dumfries.	Whitesands Project (Flood Protection Scheme and Public Realm) has been completed which identified works that should be completed within Dumfries including construction of flood defences along the River Nith in Dumfries Standard of Protection: 75yr	*£18.9m	PV Damages Avoided £79.4m In the study area there are 59 residential and 107 non-residential properties which flood in the 200 year + climate change event, which all have a reduced impact of flooding and will benefit from the 1 in 75 year scheme.	2.67	8	17 Of 41	1 Of 5	1 Of 4	-	C1 (2017)	The council would be looking to commence the works in the first half of cycle 1. The study has gone through a number of alterations after public consultation and internal council comment from elected members. Further refinement of the design likely.	Yes Capital funding has been identified for the next three financial years, (2015/16, 2016/17, 2017/18)	The Whitesands area of Dumfries has suffered regular flooding which impacts commercial and residential properties in the area. Over a number of years Dumfries and Galloway council have commissioned a number of studies to examine and understand the flooding issues along with potential mitigation options. The design is looking to enhance the local amenity value of the river while taking account of the local concerns of impact to parking lost. The BCR used in prioritisation was provided by D&G council based on a current draft report prepared for the 1 in 75 year standard of protection Economic damages to properties have been capped at x2 rather than x1 market value. If damages are capped at x1 market value the BCR reduces to 1.8. Risk to life has been economically assessed due to risk from fast flowing deep water. If risk to life is excluded, the BCR reduces to 1.8
Perth & Kinross Council **Milnathort**	Reduce economic damages and number of residential properties at risk of surface water flooding as far as practical.	The Milnathort Surface Water Investigation study by Atkins recommended a surface water scheme (pumping stations). The scheme would provide 1:100 year + climate change standard of protection. The scheme requires detailed design and subject to funding would be implemented in the latter part of the FRMP cycle (2016 - 2022). Standard of Protection: 100yr + CC	*£1.2m	PV Damages Avoided £4.1m Study report shows 66 RPs and 13 NRPs at risk	3	1	18 Of 41	3 Of 7	2 Of 4	-	C1	Preliminary Stages Flood study completed in January 2011 Current forecast completion for outline design development is December 2016. Current forecast for scheme publication is June 2017	No A business case is being submitted to the Council's Capital Programme for consideration in August 2015).	The Milnathort Flood Prevention Scheme was built in 2006 to provide residents with a 1:100 year standard of protection from river flooding on the Back Burn. A second smaller scheme was carried out in 2010 to replace the flood bund which was overtopped and collapsed during the flooding of December 2006. Surface water flooding occurred again in 2009 and 2012 and so this further scheme has been developed to address this flooding mechanism. The proposed scheme will provide a 1:100 year standard of protection against surface water flooding, and will include an additional allowance for climate change
The Highland Council **Smithton and Culloden**	Reduce risk from surface water flooding in Smithton and Culloden.	The Proposed Smithton and Culloden FPS consists of Culvert replacement, sediment and debris management and flood storage area. Standard of Protection: 200yr + CC	£7.9m	PV Damages Avoided £19m The action would result in a potential reduction in risk to 132 properties which are currently at risk during medium likelihood floods. Emergency services and utility sites could also benefit.	2.4	6	19 Of 41	2 Of 4	1 Of 3	-	C1 (2018-19)	Preliminary Stages Ongoing Initial public consultation taken place. Currently refining scheme proposals and completing consultations to recommend for formal consultation before the end of the year (2015).	Yes Planning Development and Infrastructure Committee approved committed funding 2015-2018. Following years to be submitted in due course.	Combination of works to remove culverts, replace debris screens and flood storage to protect communities affected by flooding on a number of occasions in recent years. Further detail design will be completed following discussions with the community on current proposals

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Dumfries & Galloway Council **Stranraer work item 4 &6**	Reduce the risk of river / surface water flooding to residential and non-residential properties in Stranraer.	Work Item 4 is concerned with alleviating flooding to properties in the Ochtrelure area. The flooding in the area is widespread, the main reason being hydraulic capacity issues at the head of the system. The favoured option includes diversion of flows. Work Item 6 is concerned with flooding on the Town Burn mainly downstream of the Railway Culvert. The preferred option for the Station Road area is to regulate flow passing through the Railway culvert and therefore alleviate flood risk in this area Standard of Protection: 200yr	£0.4m	PVD Work Item 4 £0.6m PVD Work Item 6 £0.4m There are 160 residential and 31 non-residential properties at risk of flooding during a 200 year river	2.55	2	20 Of 41	2 Of 5	2 Of 4	-	C1 (2017-18)	Currently investigating land purchase and potential framework contractors.	Yes Capital funding has been identified, but is unlikely to fully cover costs of the scheme. Outstanding work items may be promoted as a scheme. Depending on works costs funding may be sought.	The remaining two work packages in Stranraer were identified as part of a larger series of eight works in the area with the other completed work funded by the Council. Work Item 6 may also offer protection to stretches of the A77 and the A717.
City of Edinburgh Council **Water of Leith**	Reduce risk to community facilities and economic damages to residential and non-residential properties in Edinburgh at Murrayfield / Roseburn (phase 2) and Coltbridge, Gorgie and Saughton. Consideration will be given to provision of PLP in other areas on the water of Leith.	Areas yet to be addressed have been reviewed and it is intended to progress future phase defences at Coltbridge, Gorgie and Saughton	£12.8m	PV Damages Avoided £22.9m BCR Coltbridge area 2.53 BCR Gorgie area 0.98 BCR Saughton 2.45 Risk to life has been economically evaluated and comprises around 30% of damages avoided in the Gorgie cell	1.79	9	21 of 41	4 Of 7	1 Of 1	-	C1	1961 Act Scheme Flood study completed 2002. Progressed under 1961 Act and Scheme confirmed following Public Local Inquiry Notice Served April 2003 Planning Consent given to the scheme as modified by Scottish Ministers 2008 08/00606/FUL Dates yet to be set for commencement and forecast completion	No However capital costs have been incurred in developing the Scheme in previous years	The Scottish Government was undertaking a spending review when the tenders for the Water of Leith Flood Prevention Scheme were returned in 2011. It was apparent that there was insufficient funds to award the tender, accordingly the City of Edinburgh Council elected to progress the Scheme in Phases. The Scottish Government made funds available and Phase 1 is now complete. Tenders have been returned for Phase 2 (Roseburn / Murrayfield) and these are currently being assessed. The Council is fully funding Phase 2. Areas yet to be addressed have been reviewed and it is intended to progress future phases at Coltbridge, Gorgie and Saughton and this is subject to funds being made available.
The Highland Council **Caol and Lochyside**	Reduce flood risk in Caol from Loch Linnhe	The proposed Caol Flood Scheme should be progressed to detailed design and construction. The proposed Caol Flood Scheme includes sections of embankments, sheet piled and concrete retaining walls, and rock armour revetment along the embankment to reduce wave overtopping and protect against erosion. Costs updated to reflect slight changes to preferred option. Standard of Protection: 200yr	£6.2m	PV Damages Avoided £12.2m The scheme will reduce flood risk to 274 residential and 23 non-residential properties,	1.97	7	22 Of 41	3 Of 4	2 Of 3	-	C1 (2017-18)	Preliminary Stages Ongoing Initial public consultation taken place. Currently refining scheme proposals and completing consultations to recommend for formal consultation before the end of the year.	Yes Planning Development & Infrastructure Committee approved committed funding 2015-2018. Following years to be submitted in due course.	Rock armour revetment along the embankment to reduce wave overtopping and protect against erosion, sections of embankments, sheet piled and concrete walls.
Dumfries & Galloway Council **Langholm**	Reduce the risk of river flooding to properties in Langholm.	Langholm Flood Risk Assessment has been completed which identified works that should be completed within Langholm including construction of flood defences along the River Esk and Wauchope Water. The scheme design is being refined to manage potential flood risk from minor watercourses as outlined in the report. Standard of Protection: 200yr	£2m	PV Damages Avoided £4.9m There are 38 residential and 29 non-residential properties at risk during a 25 year river event	2.00	4	23 Of 41	3 Of 5	3 Of 4	4 Additional refinement of the design to incorporate the more prominent risk from smaller watercourses is required.	C1 (2019-2020)	Further refinements to scheme options based on culvert recommendations are being looked at.	No LFRMP Actions including Langholm will be presented to service committee on 14 July 15. Further approval for Capital monies will be required from Policy and Resources Committee.	Flood Warning to be delivered by SEPA. Planned scheme for 2016 on Esk at Langholm This action may also benefit a short section of the primary road A7, but this has not been included in the PVD figure

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Flood Protection Schemes and Works v4_DRAFT

Version Date: 10/08/2015

Location	Objective	Scheme Description	PV Scheme costs - (* indicates	Economic Benefits	BCR	Non-Monetised Score	Ranking (evidence based)			Ranking (local preference) Reason	Proposed delivery Cycle	Scheme Status	LA Funding identified (if Yes, which	Supporting Text
Dumfries & Galloway Council **Newton Stewart/ River Cree**	Reduce the risk of river flooding to properties in Newton Stewart.	Newton Stewart Flood Study has identified the benefit of potential works within Newton Stewart including construction of direct defences along the River Cree and Penkiln Burn. Consideration is also being given to the raising of a footbridge over the River Cree in combination with direct defences and property protection to increase the design standard f protection of the works. Standard of Protection: 10yr	£7.5m	PV Damages Avoided £12.3m There are 19 residential and 6 non-residential properties at risk during a 10 year river event, based on strategic mapping. This action may also offer protection to a stretch of the A714 and a number of utilities including an electricity substation and telecommunications	1.64	7	24 Of 41	4 Of 5	4 Of 4	3 Frequency of flooding and flood history.	C1 (2019-2020)	The council are looking to improve the current SoP offered by the scheme including looking at increasing conveyance, NFM actions and council stored and maintained PLP.	No LFRMP Actions including Newton Stewart will be presented to service committee on 14 July 15. Further approval for Capital monies will be required from Policy and Resources Committee.	The Newton Stewart area has a history of flooding which causes disruption and flooding to properties. The design of the scheme is current being revised to incorporate feedback from other scheme designs in the area. Flood Warning to be delivered by SEPA. Planned scheme for 2016 on Cree at Newton Stewart. The current standard of protection of the proposed scheme is 10 years, although higher standards of protection are currently being considered as part of the design refinement. 1 in 50 and 1 in 200yr Standards of protection have also been considered. BCRs are 0.75 and 0.6 respectively. There is a significant jump in scheme cost between the 1 in 10 and 1 in 50yr, but relatively little between the 1 in 50 and 1 in 200. Wall heights in excess of 2m would be required for the 1 in 200yr option, which is unlikely to be locally acceptable. Upstream storage was identified as a possibility, but not economically appraised. This is still under review and may lead to a reduction in defence height / further increased standard of protection.
Glasgow City Council **White Cart Water Phase 3**	Reduce the risk of river flooding to residential properties and non-residential properties from the White Cart Water.	The White Cart Water Phase 3 includes the building additional direct defences in locations where properties are still identified to be at risk. Standard of Protection:200yr	£6.1m	PVD Avoided £8.9m 87 residential properties; NRPs responsible for 75% of damages.	1.45	7	25 Of 41	4 Of 7	1 Of 2	-	C1 (2016-2017)	Work is being done to identify the benefits from this phase of the works.	Yes 2016-2022	Full cost benefit ration document provided to SEPA 28 May 2015 and these have been used to modify the data included in the prioritisation.
East Ayrshire Council **New Cumnock**	Reduce risk of river flooding to residential properties and non-residential properties in New Cumnock.	New Cumnock Flood Study has been completed which identified works that should be completed within New Cumnock including construction of flood defences along the Afton Water and Connel Burn. Standard of Protection: 200yr		The standard of protection for the proposed scheme is 200 years. There are 108 properties at risk during a 200 year river event, based on strategic mapping. The PVD is £2,660,761 and the benefit cost ratio is 1.27 (figures taken from the 2014 study). This PVD figure includes road network benefit (A76). This action may also offer protection to a stretch of single track railway and a number of utilities including two electricity substations and a telephone exchange, however these have not been included in the PVD figure	1.27	9	26 Of 41	5 Of 5	1 Of 1	-	C1 (2016)	Full design is currently progressing with a consultant being appointed. Land acquisition is currently being looked at. Protected species and habitat study have started.	Yes 2015 – 2016 funding secured. Further funding for the remainder to be confirmed.	New Cumnock has suffered a number of recent flood which have highlighted the risk of flooding within the local community and surrounding area. The identified flooding impacts residential and commercial properties, agricultural and the main trunk road which connects Kilmarnock and Dumfrie
Perth & Kinross Council **South Kinross**	Reduce economic damages to residential and non-residential properties caused by river flooding.	Mouchel's Flood Protection Study recommended a flood scheme for the South Queich, Gelly Burn and Clash Burn. The scheme would consist of flood defence walls and provide a 1:200 year + climate change standard of protection. Standard of Protection: 200yr + CC	£3.2m	PV Damages Avoided £5.5m	1.48	6	27 Of 41	5 Of 7	3 Of 4	Agree with evidence - based LA rank	C1 implemented in the latter part of the FRMP cycle	Preliminary Stages Flood study completed in 2010 (minor update required to text within report – this is a matter of presentation only); outline design development to proceed (once funding situation clarified).	No A business case is being submitted to the Council's Capital Programme for consideration in August 2015)	Following flood events in 1993, 1999, 2006 and 2008 the Council has developed a flood scheme to address the risk of river flooding to the South Kinross area from the South Queich, the Gelly Burn and the Clash Burn. The proposed scheme would provide a 1:200 year standard of protection, and will include an additional allowance for climate change. The scheme requires detailed design / refinement

Flood Risk Management (Scotland) Act

FRM Strategies – Prioritisation of Actions

Flood Protection Schemes and Works v4_DRAFT

Version Date: 10/08/2015

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West Dunbartonshire Council **Gruggies Burn**	Reduce the risk of the Gruggies Burn / coastal flooding to residential properties, non-residential properties and transport in Dumbarton.	The potential for upstream storage should be further investigated, in isolation or in conjunction with direct defences from Hunter's Burn to Castle Street and the wall downstream of Castlegreen Street. These defences are part of a scheme that also covers works in objective 11075. Standard of Protection: 200yr	*£14.5m	PV Damages Avoided £19.5m There are 567 residential properties and 97 non residential properties within the benefiting area of this scheme. In addition Emergency services community facilities, utilities and a section of primary road also benefit from this protection.	1.34	7	28 Of 41	5 Of 7	1 Of 1	-	C1 (2018-19)	Study has brought the 2004 report up to date and looked at refining costs. Benefits are in the report however further work will be required on option development and benefits.	Yes Funding identified in the approved long term capital plan for 2018/19 with additional funding being provided this current financial year to take forward the development and approval of the scheme	
North Ayrshire Council **Mill Burn Millport**	Reduce the risk of river flooding to residential properties in Millport along the Mill Burn.	The Millport Burn Flood Risk Assessment has provided information along with an economic appraisal which identifies potential options to mitigate flooding by diverting flows to a separate receiving watercourse. It is recommended that the council seek funding to progress with the development of the works outlined in the study and further look at the potential environmental and social impacts of the identified works including diversion of reservoir flows and control structures. Standard of Protection: 100yr	*£1.1m	PV Damages Avoided £1.9m 31 residential and 9 non residential properties, The preferred action is the diversion of flows and it is uncertain the impact that this will have on the new receiving watercourse. Although there is limited potential impact to properties there may be alteration to the channel and floodplain of the receiving watercourse.	1.8	2	29 Of 41	3 Of 3	3 Of 3		C1			Flood study has completed with cost benefit analysis. Further works on the potential impacts of the options are required to identify the preferred option. A report is currently being prepared for submission to Cabinet (August 2015) for approval to progress project and request appropriate funding.
The Highland Council **Drumnadrochit**	Reduce flood risk in Drumnadrochit from the River Enrick	Flood protection works in the form of direct defences need to be taken forward to detailed design stage. Standard of Protection: 200yr	£0.7m	PV Damages Avoided £1.0m The flood protection works would reduce risk to 27 properties and reduce disruption and closures to the A831 road	1.44	5	30 Of 41	4 Of 4	3 Of 3	-	C1 (latter half)	Preliminary Stages Ongoing Outline solution developed but further refinement/ consultation needed before formal consultation will take place (anticipating next year)	Planning Development & Infrastructure committee approved committed funding 2015-2018. Following years to be submitted in due course.	Direct defences in Drumnadrochit Significant proportion of damages related to disruption on key transport route.
Aberdeenshire Council **Stonehaven**	Reduce flood risk in Stonehaven from the River Carron and Glaslaw Burn	Flood protection works are recommended to reduce the likelihood of flooding to Stonehaven from the River Carron and Glaslaw Burn from medium likelihood floods. The flood protection works will include a combination of modifications to conveyance through upsizing of culverts and altering bridges, removing weirs and installing trash screens and the construction of direct defences. Standard of Protection:200yr + CC	£16.5m	PV Damages Avoided £20.3m The flood protection works would reduce risk to 372 residential properties which are estimated to be at risk during medium likelihood floods.	1.23	6	31 Of 41	1 Of 3	1 Of 2	-	C1 (2017)	Notification of Flood Order Published 3rd July 2015 Public consultation complete. Publication of Flood Order commenced 3 July 2015 for a period of eight weeks Notification period ends 28th August 2015	Yes Approved by committee and in Capital Plan. Scheme development 2015/2016. Construction programmed for 30/01/17 - 10/09/18	Long history of flooding with most recent floods in 2009 and 2012 causing significant damage / disruption to the town. Commercial centre of the town, a school / nursery and number of vulnerable residents at risk. The current full capital cost for the scheme has been approved by committee, and is allowed for in the Council's Harbours, Coast Protection and Flooding line in the Capital Plan. However, we would still seek Scottish Government Funding for this scheme and any subsequent non-grant aided costs for the scheme would still have this approval in principle.

Flood Risk Management (Scotland) Act

FRM Strategies – Prioritisation of Actions

Flood Protection Schemes and Works v4_DRAFT

Version Date: 10/08/2015

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Aberdeenshire Council **Huntly**	Reduce flood risk in the Meadows area of Huntly (including A96 and A920, Ski Centre and caravan park) from the River Deveron and Meadows Burn	Flood protection works are recommended to reduce the likelihood of flooding to Huntly from the River Deveron and Meadows Burn from medium likelihood floods. The flood protection works will include a combination of modifications to conveyance through upsizing of culverts, constructing embankments and storage of water. Standard of Protection:200yr + CC	*£3.6m	PV Damages Avoided £3.4m The flood protection works would reduce risk to 50 residential properties and 13 non-residential properties which are estimated to be at risk during medium likelihood floods.	1.1	7	32 Of 41	2 Of 3	2 Of 2	-	C1 (2016)	Notice of Final Decision Complete 30th June 2015 Hearing held and final decision made to proceed with the scheme as planned. Under schedule 2 (sections 10 &11), notification of parties of the final decision to Confirm the scheme without modification, as well as confirming the scheme in a local newspaper & Edinburgh Gazette has commenced (June 2015) Deemed planning permission requested under Section 14(2) June 2015. Commencement of Scheme (Section 11) expected August 2015	Yes 2016/2017	History of flooding to the Meadows area of Huntly including several recent floods. A nursing home is a high risk of flooding and has been affected by flooding / evacuated on numerous occasions. The current full capital cost for the scheme has been approved by committee, and is allowed for in the Council's Harbours, Coast Protection and Flooding line in the Capital Plan. However, we would still seek Scottish Government Funding for this scheme and any subsequent non-grant aided costs for the scheme would still have this approval in principle.
Perth & Kinross Council **Scone**	Reduce economic damages to residential and non-residential properties caused by river flooding.	The preferred option consists of raising existing footbridges and constructing riverside defences. Standard of Protection: 200yr	£0.6m	PV Damages Avoided £2.5m 35 residential properties and 9 non-residential properties at risk in a 200 year event	1.14	5	33 Of 41	2 Of 2	4 Of 4	-	C1 (latter part)	Preliminary Stages Flood study completed in 2007; outline design development to proceed (once funding situation clarified).	No A business case is being submitted to the Council's Capital Programme for consideration in August 2015)	Following a flood event in 2004, the Council has developed a flood scheme to address the risk of river flooding to the Goshenbank Park and Burnside area in Scone from the Annaty Burn. The proposed scheme would provide a 1:200 year standard of protection. BCR and scheme costs require updating and assessment for a wider range of return periods prior to detailed design
Stirling Council **Bridge of Allan**	Reduce economic damages to residential and non-residential properties in Bridge of Allan caused by flooding from the Allan Water.	Implementation of flood protection works (flood embankments/sheet piling) in Bridge of Allan to protect properties from 1:50 year event. A recent FP study has indicated that protection to 1:200 would not be economically viable. Standard of Protection: 50yr	£4.4m	Preliminary BCR for 50yr: temporary defences 1.22, permanent defences 0.72.	0.72	9	34 Of 41	1 Of 3	1 Of 3	-	C1 (latter part)	Preliminary Stages Ongoing Optioneering completed 2014, Detailed design underway currently Forecast Notification complete 2019 Deemed planning permission granted 2020 Notice of final decision complete 2019 Commencement of Scheme 2020 Completion of Scheme 2021	No The council are aware of the scheme requirements through regular updates and it is minuted that internal funding from Stirling Council is dependent on being successful in a bid for the 80% Grant, Intention would be to fund the construction phase 2019 onwards, the second half of the FRM cycle	A study indicated that protecting the town to 1:200 year protection would be unviable. The 1:50 scheme has two options - demountable defences (BRC + 1.22) or permanent defences (BCR = 0.72). These are considered the only options, however, demountable defences are not considered practically viable due to the length of such defences and their reliability. The BCR does not consider intangible or indirect benefits. Bridge of Allan is hydrologically linked to Stirling - A Stirling scheme could not be progressed without adversely impacting the Bridge of Allan community unless the Bridge of Allan scheme is constructed. There is also a local perception of protection due to the existing defences which are in a poor state of repair and would only provide 1:20 year protection if they were repaired to provide the full protection capacity Bridge of Allan scheme to be implemented prior to Stirling due to knock-on impact on water levels
West Lothian Council **Broxburn Liggat Syke**	Reduce economic damages to residential and non-residential properties in Broxburn, West Main Street, caused by flooding from the Brox Burn.	Construction of the outstanding elements of the Broxburn flood prevention scheme relating to 2 flood storage basins in the catchment of the Liggat Syke with adequate storage to provide protection from 1:100 year event. Standard of Protection: 100yr	*£1.6m	BCR 1.22	1.22	4	35 Of 41	6 Of 7	1 Of 1	-	C1	Outstanding element of Broxburn FPS (Liggat Syke separate from rest of scheme already delivered). Scheme was funded but at less than 80:20 contribution.	Yes 2013-2018 Funding for the Flood Prevention Scheme is included in the Council's current capital programme 2013-18	The Broxburn Flood Prevention Scheme was promoted under the 1961 Act and was confirmed by Scottish Ministers. Construction is at an advanced stage but it will not be possible to construct the attenuation structures in the upper catchment without additional funding from the Scottish Government as there is insufficient Council funding due to the unsatisfactory settlement from the Scottish Government at the time which fell far below the 80% of eligible cost. Phase 2 works are currently out to tender and due to be constructed 2015 - 2017.

Flood Risk Management (Scotland) Act

FRM Strategies – Prioritisation of Actions

Flood Protection Schemes and Works v4_DRAFT

Version Date: 10/08/2015

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East Lothian Council **Haddington**	Reduce economic damages to residential and non-residential properties in Haddington caused by flooding from the River Tyne.	A Flood Protection Study for Haddington is currently underway and due to report in summer 2015. The study has identified the need for flood protection actions including direct flood defences and possibly NFM works which will, subject to funding, be implemented prior to 2021 (proposed for 2018/19)	*£7.4m	PV Damages Avoided £8.8m 231 properties at risk	1.19	4	36 Of 41	7 Of 7	2 Of 2	-	C1	Preliminary Stages Ongoing Option Appraisal Report published in July 2015 Forecast: Notification May 2016 April 2018 - Start on site Completion of Scheme March 2019	No Scheme proposed for 2018/19. Capital Budget only approved for 3 years i.e. until 2017/18	A Flood Protection Study for Haddington is currently underway and due to report in summer 2015. Draft findings have been supplied to SEPA for use in the prioritisation. The study has identified the need for flood protection actions including direct flood defences and possibly NFM works which will, subject to funding, be implemented prior to 2021 (proposed for 2018/19)."
Moray Council **Newmill**	TBC	Scheme consists of a network of ditches to the north of the village, a cascade, flood retaining walls and a replacement bridge. Standard of Protection: 200yr + CC	£1.4m	PV Damages Avoided £1.9m 13 Residential and 5 Non-Residential properties at risk	1.32	2	37 Of 41	3 Of 3	1 Of 1	-	C1	Preliminary Stages Ongoing Detailed design underway	Yes 2015/2016	Most recent flooding was in 2009 when flooding occurred in September and November causing damage to a number of residential and commercial properties as well as local infrastructure. Funding for this scheme has been allowed for in the Council's 10 year capital plan. Note this scheme was not included in the strategies and prioritised list as was originally expected to be complete pre-strategy publication
Glasgow City Council **Camlachie Burn**	Reduce the risk of Tollcross Burn and Camlachie Burn flooding to residential properties and non residential properties in Shettleston.	Series of culvert capacity / restriction improvements, including opening urban watercourses. Standard of Protection: 200yr intended however modelling still shows residual risk at lower return periods in some places – work is underway to mitigate	£1.01m	PV Damages Avoided £0.99m	0.9	6	38 Of 41	7 Of 7	2 Of 2	-	C1	Preliminary Stages Ongoing		This is a strategically important scheme which would help to deal with surface water issues in the north of the city. Glasgow City Council are seeking only 25% of the capital cost for this project as it is linked to the city deals, which will provide further funding. *Due to late availability of scheme data it has not been possible to assess non-monetary scores and a total score of '0' has been used. It is likely that this would be greater had assessment been possible, and the ranking position may therefore be an underrepresentation.
Stirling Council **Stirling**	Reduce economic damages to residential and non-residential properties in Stirling caused by flooding from the River Forth). Reduce risk to people in Stirling caused by flooding from the River Forth. Reduce economic damages to residential and non-residential properties in Stirling, Riverside and Raploch caused by flooding from the River Forth.	A recent FP study by Mouchel investigated options to protect Stirling against 1:200 year event. None of the options considered were economically feasible. Further investigation into Lower SOP found lower level protection (1:50) would only be a viable option in Riverside due to low damages at lower thresholds. BCR for the 1:200 year options was revisited 2015 but changes to this would be unlikely to allow significant enough increases to allow the BCR to reach unity. Standard of Protection: 200yr	Total £26.2m Riverside £11.1m; Raploch £4.3m; Cornton/ Causeway-head £10.8m; North Cornton £2.2m	PV Damages Avoided £17.7m (total) BCRs (200yr): Riverside 0.69, Raploch, 0.57, Cornton/ Causewayhead 0.39, North Cornton 0.03.	0.7	7	39 Of 41	2 Of 3	2 Of 3	-	C1	Preliminary Stages Ongoing Optioneering completed 2014, outline design to be commissioned 2016 if Scottish Government indicate this scheme is viable for funding Forecast dates Notification 2018 Commencement 2020 Completion 2021 Intention would be to profile funding from 2016 onwards, detailed design to be completed end of 2018 when statutory process would begin with intention to start construction start of 2020.	No The council are aware of the scheme requirements through regular updates and it is minuted that internal funding from Stirling Council is dependent on being successful in a bid for the 80% Grant,	Flooding in Stirling is considered strategically significant with a large number of properties and infrastructure affected at low return periods. Stirling Council have considered a range of options for this area and direct defences were identified as the only viable option but have a marginal BCR. The depth of flooding associated with the 200 year event is well in excess of the ability of PLP products to protect. A lower SoP would only offer limited protection to the 50 year level in one small area and would not safeguard any major infrastructure. Bridge of Allan scheme to be implemented prior to Stirling due to knock-on impact on water levels
Inverclyde **Quarrier's Village**	Reduce the risk of Gotter Water / River Gryfe flooding to residential properties in Quarriers Village.	Flood embankments creating offline storage with control. Standard of Protection: 50yr	£0.24m	PV Damages Avoided £0.27m	1.11	1	40 Of 41	6 Of 7	4 Of 4	-	C1	Preliminary Stages Ongoing Design Tender Awarded wc 29/6/15 Expected Design programme 13/07/15-16/10/15	Yes 2016/2017	Detail design tender for these projects has just been awarded. Design is due to start 13 July 2015

Flood Risk Management (Scotland) Act

FRM Strategies – Prioritisation of Actions

Flood Protection Schemes and Works v4_DRAFT

Version Date: 10/08/2015

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Stirling Council **Callander**	Reduce economic damages to residential and non-residential properties caused by river flooding.	Implementation of flood protection works (flood embankments) in Callander to protect Meadows car park and residential properties from 1:50 year event. Stirling council are keen to implement these works despite the low BCR (0.09). The works would require detailed design and would be implemented in the latter half of the FRMP cycle. Standard of Protection: 50yr	£2.4m	PV Damages Avoided £0.2m BCR = 0.09; 15 residential properties and 15 non-residential properties, Meadows car park and trunk road (A84).	0.09	4	41 Of 41	3 Of 3	3 Of 3	-	C1	Preliminary Stages Ongoing Optioneering completed 2014, Detailed design underway, brief issued May 2015 Forecast Notification 2018 Commencement of Scheme 2019 Completion of Scheme 2019 Intention would be to profile funding from 2017 onwards, detailed design to be completed end 2017 when statutory process would begin with intention to start construction in 2019	No The council are aware of the scheme requirements through regular updates and it is minuted that internal funding from Stirling Council is dependent on being successful in a bid for the 80% Grant,	Due to flooding mechanism in this area (the onset of fluvial flooding in Callander is relatively infrequent and as a result, damages are relatively limited) the CBR for 1:200 scheme is very low. It is considered that protecting parts of town to 50 year levels was more technically and practically feasible. 50 year protection is the maximum level of protection that can be provided that will not adversely impact other areas within Callander and also maintains access along the Trunk Road. Through consultation with Callander community the decision has been reached to progress the 50 year scheme rather than a greater level of protection and to concentrate other efforts on surface water flooding.

Page 25

Description of the non-monetised scoring elements can be found in Paper 3 – Method (available via Huddle). It comprises a range of community and environmental criteria that are generally poorly represented within economic appraisal.

Flood Risk Management (Scotland) Act

FRM Strategies – Prioritisation of Actions

Flood Protection Schemes and Works v4_DRAFT

Version Date: 10/08/2015

Intended Flood Protection Works

The following have been identified by the relevant LA to be progressed as flood protection works rather than as a FP Scheme

Location	Objective	Works Description	Works Whole Life Cost	Economic Benefits	BCR	Non-monetised score	Delivery Cycle	Supporting Text
East Dunbartonshire Council **Park Burn**	Reduce the risk of Park Burn /surface water flooding to residential properties in Kirkintilloch.	The Park Burn Flood Risk Assessment has been extended to provide options for the mitigation of flooding from the Park Burn. The study identified cost beneficial works which included re-grading of the channel which would offer protection up to the 1 in 75 year flood. It is recommended that additional PLP options and NFM options are looked at to potentially complement the proposed works. The report noted that a significant proportion of the costs are due to the maintenance that will be required with a small capital cost. This should be factored in by the council. Standard of Protection: 75yr	£0.4m	PV Damages Avoided £1.5m (This option could potentially increase to a SOP of 200 year by adopting individual property level protection. This scheme would benefit by itself circa 70 residential properties.	4.1	6	C1 (2018-19)	Works has been identified in the capital programme and there is capacity to accommodate the 20% contribution towards its delivery. In terms of what year this is flexible as we have an approved 10 year capital programme for the Roads Service and there's always an option to bid for more. Preliminary stages Completed – FRA / Optioneering studies, Dec 2014 including Cost Benefit Analysis April 2015. Currently progressing with producing Tender doc / Spec and Technical drawings for project work will complete this financial year 15/16. Agreements in place - Will to consult all major stakeholder (i.e. SEPA and Scottish Canals) Planning permission granted (if required) - EDC Planning will be consulted as a Consultee to see if planning will be required for the above works. Environmental approvals granted (if required) – CAR Licence / Agreements discussions to be had and any further study required to protect habitat will be undertaken prior to work, only if required. Commencement of works - We would undertake this work in the first cycle hopefully within the first 3 year period. Completion of works - As above however would be between 2016 – 2019
Stirling Council **Aberfoyle**	Reduce economic damages to residential and non-residential properties in Aberfoyle caused by flooding from the River Forth (9002)	Implementation of flood protection works (flood embankments) in Aberfoyle to protect residential and local business properties from 1:5 year event. Stirling council are keen to implement these works despite the low BCR (0.16) to protect property, to maintain access to the school and to maintain emergency service access beyond Aberfoyle. The works depend on the provision of flood warning by SEPA. The works would be carried out simultaneously with flood warning provisions, ideally in first part of FRMP cycle. Standard of Protection: 5yr	Detailed design of 5yr scheme £135K + GI £60K. Scheme construction costs TBC once detailed design complete.	BCR for 200yr = 0.16 (BCR for 5yr not developed will be revised once detailed design complete). 7 residential and 13 non-residential properties, 3 utilities and 1 road (single access to school and villages for 14 miles).	0.16	9	C1	The scheme would be funded by LA. Council do not wish to pursue scheme prior to installation of Flood Warning
Perth & Kinross **Bridgend Perth**	Reduce economic damages and number of residential properties at risk of surface water flooding as far as practical.	Capita completed a study into surface water flooding at Bridgend Perth which recommended a high capacity drainage channel and outfall to the River Tay.	£241k (LA Funded)	The economic impacts have not been defined at this stage.	-		C1	The scheme would be LA funded

Flood Risk Management (Scotland) Act

FRM Strategies – Prioritisation of Actions

Flood Protection Schemes and Works v4_DRAFT Version Date: 10/08/2015

The following schemes (listed in alphabetical order by location) were assigned a BCR robustness category 'C' and therefore were not ranked:

Local Authority	Selected Action	Location	Notes
Aberdeen City	6019010006	Culter Burn	Details of scheme to be finalised but likely to include direct defences and improvements to conveyance. Detailed design work to commence in 2015 – likely to be ready for construction second half of cycle 1. Outline approval to progress with the scheme has been granted by the Community Housing and Infrastructure Committee. Detailed modelling complete and optioneering / design underway.
Argyll & Bute	110030006	Helensburgh	Further study is required to identify the wider benefits of the proposed actions.
Argyll & Bute	110841006	Kilcreggan	Surface water – study ongoing. Problem identified but options not yet identified.
West Lothian		Livingston, Broxburn (SUDS legacy project)	Early SWMP outputs – There is currently no defined funding mechanism for surface water management
West Lothian		Livingston, Broxburn (SWMP actions)	Early SWMP outputs – There is currently no defined funding mechanism for surface water management
Highland	1021030006	Mill Burn Inverness	Scheme will be a combination of flood walls and sheet piling, embankments and a culvert upgrading. Study is due to report by late August 2015 – if a viable option is identified, Highland Council will seek to progress during Cycle 1 Preliminary Stages Ongoing Outline design completed, some detail design completed. Economic appraisal underway.

NFM Works – these works are unprioritised but will be progressed by LAs in Cycle 1 unless otherwise stated.

Selected Action	Location	Objective	Indicators	Next-Step	Cost of Next Step
NFM Works (70110003) (70120003)	(07/05)	Reduce economic damages to residential and non-residential properties in Brechin caused by flooding from the River South Esk. Reduce the number of properties at risk of flooding by 230 (1:100yr). (7011) Reduce risk to people from in Brechin caused by flooding from the River South Esk. (7012)	£97,707 Annual Average Damages (Residential Properties) £264,139 Annual Average Damages (Non-Residential Properties). 191 People at Risk (1 in 200 year event). 191 People at Risk (1 in 200 year event)	Natural Flood Management works are continuing following completion of the Brechin Flood Protection Scheme. It includes upland reforestation.	£20k to £50k
NFM Scheme (110720004)	Loch Lomond and Vale of Leven (11/01)	Reduce the risk of the Gruggies Burn / coastal flooding to residential properties, non residential properties and transport in Dumbarton.	1281 Residential properties; 112 Non-Residential properties; 1.1 km of Road, Annual average damages of £5,862,636.	Currently there are plans for native woodland planting in one of the areas identified, this should be progressed. A natural flood management study to further investigate in detail the remainder of the areas of potential benefit for runoff control to Dumbarton should be considered. Land use management.	
NFM Scheme (120200004)	Irvine to Troon (12/07)	Reduce the risk of coastal / surface water flooding to non residential properties in Troon.	414 Non-Residential properties, Annual average damages of £84,674.	The sand dune propagation in Troon should continue. Ongoing action not looking for funding.	To be provided by South Ayrshire Council
NFM Scheme (120240004)	Prestwick / Ayr (12/09)	Reduce the risk of coastal / surface water flooding to residential properties and non residential properties in Ayr.	227 Residential properties; 116 Non-Residential properties; Annual average damages of £165,612.	The sand dune propagation in Ayr should continue. Ongoing works - allowance of natural processes.	To be provided by South Ayrshire Council.

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Flood Protection Studies_v4.0_DRAFT Version Date:10/08/2015 NPWG Meeting 3 (Paper 6)

The following table lists (in descending national rank order) all 169 identified Flood Protection Studies. Some of these have NFM elements. Standalone NFM studies are listed in the second table within this document.

Where a study has been identified for C2 delivery, the right hand table column is highlighted in orange.

Rows highlighted in green have undergone a notable change from v3.

Where a Local Authority does not agree with the technical ranking prepared by SEPA, the entire entry is in italic and highlighted in bold for ease of interpretation.

Location	Objective	Next Step	Estimated Study Cost	Economic Benefits	PVD Damages	Mon-Monetised Score	Ranking (evidence based)			Ranking (local preference)	Reason	Proposed delivery cycle
							National	LPD	LA			
Aberdeen City Dyce and Buckburn PVA (06/15)	Reduce flood risk in Aberdeen from the River Don. Reduce flood risk from burns including open and culverted lengths Objective ID: 601501, 601502.	A study is recommended to consider all actions in order to develop the most sustainable range of options. The study should be coordinated with the Surface Water Management Plan. Outputs from the Aberdeen Integrated Catchment Study should be considered to take account of culverted water courses, burns and the Rivers Dee and Don to take a comprehensive approach to flood risk management in Aberdeen.	£50,000 - £100,000	If the whole of the Dyce and Buckburn area were to be protected from flooding, present value benefits of £62,597,204 could be achieved over the 100 year design life of a scheme. In reality the study should look to identify flooding hotspots where actions should be targeted. Further study will identify the true benefits of these actions.	£62,597,204	6	1 of 168	1 of 16	1 of 4		Council will be commencing all studies in first cycle through the Integrated Catchment Study process and will be prioritising study areas across the City Council area	C1
Scottish Borders ***Peebles, Innerleithen and Broughton PVA (13/04, 13/08)***	***1. Reduce economic damages to residential and non-residential properties and flood risk to community facilities in Peebles caused by river flooding from the Eddleston Water and River Tweed. 2. Reduce economic damages to residential and non-residential properties and flood risk to community facilities in Innerleithen caused by flooding from the River Tweed and Leithen Water. 3. Reduce economic damages to residential and non-residential properties and flood risk to community facilities in Broughton caused by river flooding. Objective ID: 13013, 13014, 13022.***	***A Flood Protection Study for Peebles, Innerleithen and Broughton (combined engineering and NFM) should assess Modification of Conveyance, Installation / modification of fluvial control structures, Direct flood Defences and Sediment Management. Natural Flood Management should assess Runoff Control and River/Floodplain Restoration and Sediment Management. The study should co-ordinate with the Eddleston Water restoration project managed by the Tweed Forum. The assessment should also consider these actions in combination and the impacts on flood risk upstream and downstream of each action.***	***£100k to £270k***	***839 residential properties and 149 non-residential properties at risk in a 200 year event with a PVD (damages avoided) of £52.3M. NFM potential benefits for 105 residential properties and 23 non residential properties at risk for a high likelihood event (Peebles)***	***£52,300,000***	***8***	***1 of 168***	***1 of 5***	***1 of 6***	***2***	-	***C1***
West Dunbartonshire Vale of Leven/ Dumbarton PVA (11/01)	Reduce the risk of River Leven / coastal flooding to residential properties, non residential properties and community facilities in Vale of Leven and Dumbarton. Objective ID: 11075.	A flood protection study should be carried out to further develop current understanding and build on studies undertaken to date. The study should incorporate the fluvial and coastal risk, and be undertaken by West Dunbartonshire Council in partnership with LLTNP, SW and SEPA. The study should assess in detail: direct defences as identified in the River Leven Flood Study; storage at Loch Lomond including discussion with other stakeholders to fully understand the wider impacts and benefits of this action; the Lomond Canal; sediment management; and assessment of the existing embankments at the golf course.	£50,000 - £100,000	There are 614 residential and 71 non-residential properties at risk in a 200 year fluvial event within the benefitting area of this action with a PVD of £31,729,481. This action may also benefit three electricity substations and 700m of railway track which are not included in this PVD figure.	£31,729,481	8	1 of 168	1 of 32	1 of 2	-	-	C1
Dumfries and Galloway Shoreline Management Plan PVA ()	Reduce the risk of coastal flooding along the Solway coastline. Objective ID: 14122.	It is recommended that a Shoreline Management Plan is carried out to refine the understanding of flooding risk to a number of communities. This study would look at the potential impact of wave overtopping the current erosion and flood protection offered and the opportunities to enhance the natural systems to further protect from flood and erosion. This study will help to identify were further detailed studies may be required.	£100,000 - £150,000	Based on the identified risk in objective areas 14121, 14011, 14029, 14032 and 14026	£26,168,000	8	1 of 168	1 of 11	1 of 10	1	-	C1

Flood Risk Management (Scotland) Act

FRM Strategies – Prioritisation of Actions

Flood Protection Studies_v4.0_DRAFT | Version Date:10/08/2015 | NPWG Meeting 3 (Paper 6)

Location	Objective	Next Step	Estimated Study Cost	Economic Benefits	PVD Damages	Mon-Monetised Score	Ranking (evidence based)			Ranking (local preference)	Reason	Proposed delivery cycle
Aberdeen City Aberdeen City PVA (06/15, 06/18)	Reduce flood risk in Aberdeen from the River Don Reduce flood risk in Aberdeen (Bridge of Don) from burns including open and culverted lengths Reduce flood risk in Aberdeen from the River Dee Reduce flood risk from burns including open and culverted lengths in Aberdeen (Deeside). Objective ID: 601501, 601502, 601801, 601803.	A study is recommended to consider direct defences and property level protection, but other actions may also be considered in order to develop the most sustainable range of options. The study should be coordinated with the Surface Water Management Plan. Outputs from the Aberdeen Integrated Catchment Study should be considered to take account of culverted water courses, burns and the Rivers Dee and Don to take a comprehensive approach to flood risk management in Aberdeen.	£50,000 - £100,000	If the whole of theAbrdeen City area were to be protected from flooding, present value benefits of £314,106,716 could be achieved over the 100 year design life of a scheme. In reality the study should look to identify flooding hotspots where actions should be targeted. Further study will identify the true benefits of these actions.	£327,562,204	6	5 of 168	2 of 16	2 of 4		Council will be commencing all studies in first cycle through the Integrated Catchment Study process and will be prioritising study areas across the City Council area	C1
Aberdeen City Bridge of Don PVA (06/15, 06/16)	Reduce flood risk in Aberdeen from the River Don. Reduce flood risk in Aberdeen (Bridge of Don) from burns including open and culverted lengths. Reduce the risk of flooding from surface water and burns in Aberdeen (Denmore) Objective ID: 601501, 601502, 601601.	The flood protection study should primarily focus on modifications to inlet of Persley Den and direct defences, but other actions may also be considered in order to develop the most sustainable range of options. The study should be coordinated with the Surface Water Management Plan. Outputs from the Aberdeen Integrated Catchment Study should be considered to take account of culverted water courses, burns and the Rivers Dee and Don to take a comprehensive approach to flood risk management in Aberdeen.	£50,000 - £100,000	Flood protection works could reduce risk to 314 residential properties and 49 non-residential properties which are at medium risk of flooding from the River Don. Present value benefits of £217,258,918 could be achieved over the 100 year design life of a scheme.	£217,258,918	4	5 of 168	2 of 16	2 of 4		Council will be commencing all studies in first cycle through the Integrated Catchment Study process and will be prioritising study areas across the City Council area	C1
Argyll & Bute Oban PVA (01/31)	Reduce risk in Oban from coastal flooding Reduce flood risk in Oban from the Black Lynn Burn Objective ID: 103101, 103102.	A study is recommended to assess flood risk from the Black Lynn Burn, including tidal element and coastal flooding in Oban. The study should focus on direct defences, flood storage, runoff control, sediment management, increasing storage on the existing lochs (Loch Gleann a Bhearraidh and Luachrach Loch), property level protection and individual property relocation for residual risk. Other actions may also be considered to get the most sustainable flood risk management options.	£25,000 to £50,000	Flood protection works could reduce the impact of the flooding of 2975 residential and 260 non-residential properties which are currently at medium likelihood of flooding. Benefits of £45,630,060 could potentially be achieved over 100 year design life of a flood scheme.	£45,630,060	7	5 of 168	1 of 22	1 of 9	1	Agree with ranking	C1
South Lanarkshire ***Lower River Clyde (Strathclyde Park to Shawfield) PVA (11/17/1)***	***Reduce the risk of River Clyde / surface water flooding to residential properties, non residential properties and transport along the River Clyde from Strathclyde Park to Shawfield. Objective ID: 11065.***	***A flood protection study should be carried out along the Lower River Clyde to further investigate the following actions in detail, separately and in combination: improving the conveyance through a number of structures along the River Clyde; the construction of a control structure on the Powburn with a pumping station to force water into the River Clyde; and the construction of flood defences at various locations along the River Clyde from Strathclyde Park to Shawfield. SUDs should be assessed in any future flood study undertaken in the area. This study may also consider the property level protection action and other complimentary actions.***	***£50,000 - £100,000***	***There are 209 residential and 777 non-residential properties at risk in a 200 year river event, with a PVD of £33,363,783. This action may also benefit 2km of A road, 660m of the M74 and 390m of railway track.***	***£33,363,783***	***6***	***8 of 168***	***2 of 32***	***1 of 4***	***2***	***This study is much larger and requires cross local authority working and therefore will take longer to set up.***	***C1***
Highland Inverness - South Kessock PVA (01/21)	Reduce risk in the South Kessock area of Inverness from coastal flooding Objective ID: 102107.	A study is needed to assess the standard of protection of existing embankments and whether they need to be improved. The study should consider wave action and combined flooding from the River Ness and Moray Firth. The study should build on existing information available.	0	Benefits of £27,561,014 could potentially be achieved over the 100yr design life of a flood scheme. There are 422 residential properties and 24 non-residential properties, which could benefit from improved flood protection.	£27,561,014	6	8 of 168	2 of 22	1 of 23	1	There are existing defences which protect South Kessock although there is some uncertainty as regards the SOP they provide. It's acknowledged that the PVD damages are likely to be significantly overestimated.	C1
North Ayrshire Shoreline Management Plan PVA ()	Reduce the risk of coastal flooding along the Ayrshire coastline. Objective ID: 12103.	The Ayrshire Shoreline Management Plan is under development, this study will look to refine knowledge of coastal flood risk in the area including wave overtopping and the current coastal protection offered.	£150,000	Based on the identified risk in the objective areas for the	£26,309,000	6	8 of 168	1 of 12	1 of 5	-	-	C1

Location	Objective	Next Step	Estimated Study Cost	Economic Benefits	PVD Damages	Mon-Monetised Score	Ranking (evidence based)			Ranking (local preference)	Reason	Proposed delivery cycle
Falkirk Grangemouth PVA (10/11)	Reduce economic damages to residential and non-residential properties in Grangemouth caused by river flooding and coastal flooding. Objective ID: 10035, 10036, 10040, 10041.	Development of proposals for the Grangemouth Flood Protection Scheme (covering objectives 10035, 10036 and 10040). Options that will be considered include direct defences, sediment management and tidal barriers/ gates as well as natural flood management (surge attenuation and sediment management). Study timescale 2015-2017, implementation of actions likely to start 2018-2027 (phased implementation).	£1.7M to £2.2M (Objectives 10035, 10036 and 10040)	1261 residential properties and 99 non residential properties with a PVD (damages avoided) of £26.8M Petrochemical works - PVD (do nothing) unknown	£26,800,000	6	11 of 168	1 of 27	1 of 5	1	-	C1
Glasgow City Shettleston PVA (11/17/1)	Reduce the risk of Tollcross Burn and Camlachie Burn flooding to residential properties and non residential properties in Shettleston. Objective ID: 11026.	A flood protection study should be carried out to further investigate the following actions in detail, separately and in combination: construction of storage from the Tollcross Burn in Tollcross Park, Sandyhills Park and Sandyhills Golf Course modification of conveyance by upgrading a culverted reach along Biggar Road; modification of fluvial control structures by replacing existing trash screens on the Tollcross Burn; and construction of a river wall along the Tollcross Burn. This study should also consider property level protection, SUDs and other complimentary actions.	£30,000 - £50,000 for the flood protection study.	There are 706 residential and 67 non-residential properties at risk in a 200 year fluvial event within the benefitting area of this action with a PVD of £53,045,023. This action may also benefit four electricity substations which are not included in this PVD figure. There is a significant jump in the damages from the 10 year to the 30 year event.	£53,045,023	5	11 of 168	3 of 32	1 of 8	-	-	C1
Renfrewshire Espedair Burn, Paisley PVA (11/13)	Reduce the risk of Espedair Burn / Gleniffer Burn / surface water flooding to residential properties, non residential properties, community facilities and transport in Paisley. Objective ID: 11059.	Scottish Water are undertaking integrated modelling of the Espedair Burn and sewers in Paisley which will assess the proposed interceptor sewer. This interceptor sewer is designed to remove significant storm sewage from the culverted burn, with the aim of improving receiving water quality and aesthetics. As flood risk reduction is not a design objective of the works, a study should be carried out to investigate if there is any remaining flood risk following these works. If the flood risk remains a flood protection study should be carried out to further investigate the following actions in detail, separately and in combination: the use of the Upper and Lower Glen Dams and Glenburn Reservoir for storage; increasing culvert conveyance; and construction of direct defences. These actions would also serve to benefit properties north of Thornley reservoir. Property level protection and SUDs should be assessed in any future flood study undertaken in the area. Other complimentary actions may be considered in this next step. These actions should also cover objective 11082, reducing flood risk to properties north of Thornley Reservoir.	£50,000 - £100,000	There are 386 residential and 145 non-residential properties at risk in a 200 year fluvial event within the benefitting area of these actions with a PVD of £15,940,269. This action may also benefit 540m of A roads. There are 309 residential and 125 non-residential properties at risk in a 200 year surface water event within the benefitting area, with a PVD of £14,104,368	£30,044,637	5	11 of 168	3 of 32	1 of 6	-	Work is being undertaken by Scottish Water that may impact the flooding within the area. The flood study looking at the remaining flood risk will need to wait until the as built works are known, therefore the study will be completed in Cycle 2.	C2
East Dunbartonshire River Kelvin PVA (11/04)	Reduce the risk of river / surface water flooding to residential properties, non residential properties, community facilities and transport (roads) in Kirkintilloch. Objective ID: 11008.	A study of the River Kelvin catchment is being undertaken and will assess the current level of flood risk. The study is being undertaken in conjunction with WDC, GCC and SEPA. This study will help to provide a revised understanding of the current flood risk to Kirkintilloch. Based on this information there may be the requirement to improve the level of protection offered within Kirkintilloch.	Unknown	The current level of flood risk is to be informed by the initial study of the River Kelvin.	£83,767,166	4	14 of 168	5 of 32	1 of 2	1	-	C1

Location	Objective	Next Step	Estimated Study Cost	Economic Benefits	PVD Damages	Mon-Monetised Score	Ranking (evidence based)			Ranking (local preference)	Reason	Proposed delivery cycle
Renfrewshire Candren Burn PVA (11/12)	Reduce the risk of river / surface water flooding to residential properties and non residential properties in Candren Burn catchment. Objective ID: 11044.	A flood protection study should be carried out to investigate further the potential to construct short sections of flood defences along the Candren Burn. SUDs should be assessed in any future flood study undertaken in the area. These actions may be incorporated into the Paisley SWMP.	£50,000 - £100,000	There are 460 residential and 54 non-residential properties at risk in a 200 year river event within the benefitting area, with a PVD of £41,478,100. There are 192 residential and 10 non-residential properties at risk in a 200 year surface water event within the benefitting area, with a PVD of £6,373,525.	£47,851,635	4	14 of 168	5 of 32	2 of 6	-	-	C1
Glasgow City Merrylee PVA (11/13)	Reduce the risk of river / surface water flooding to residential properties and non residential properties in Merrylee. Objective ID: 11027.	A study should be carried out by Glasgow City Council with the cooperation of East Renfrewshire Council to further assess in detail the flood risk in this area.	£50,000 - £100,000	Unknown	£42,607,100	3	16 of 168	7 of 32	2 of 8	-	-	C1
Renfrewshire Johnstone PVA (11/12)	Reduce the risk of river / surface water flooding to residential properties, non residential properties, community facilities and transport in Johnstone. Objective ID: 11049.	A flood protection study should be carried out to further investigate the actions recommended in the Green Networks Integrated Urban Infrastructure report including: the potential to create small areas of offline storage at a number of locations within Johnstone; and the potential to improve culvert conveyance and investigate culvert daylighting. PLP and SUDs should also be assessed in any future flood study undertaken in the area. There is potential to incorporate Kilbarchan (objective 11050) into this study. These actions may be incorporated into the Johnstone / Kilbarchan SWMP.	£50,000 - £100,000	There are 735 properties at risk in a 200 year river event as identified by the councils Interreg project. Given the size of the watercourse causing the flooding the Scottish Pluvial Annual Average Damage value has been used to approximate economic damages. The calculated AAD is 1,243,620. There are 12 residential and 84 non-residential properties at risk in a 200 year surface water event within the benefitting area, with a PVD of £1,563,364. This action may also reduce the impact of flooding to receptors outwith the benefitting area.	£38,639,407	3	16 of 168	7 of 32	3 of 6	-	-	C1
Glasgow City Croftfoot PVA (11/14)	Reduce the risk of river / surface water flooding to residential properties in Croftfoot. Objective ID: 11021.	A flood protection study should be carried out to further investigate the following actions in detail, separately and in combination: construction of storage in Glen Wood; modification of conveyance by upgrading a culvert at King's Park Avenue; and construction of a river wall along sections of the Spittal Burn. This study should also consider the NFM action, SUDs and the PLP action. SUDs may also be considered in the Croftfoot SWMP. It is proposed that Glasgow City Council will carry out hydraulic studies in the Croftfoot and Spittal areas. These studies are being promoted via the City Deals and are awaiting confirmation that funding will be approved. The Cathkin Road bypass project involving attenuation and storage is being promoted via the City Deals and is awaiting confirmation that funding will be approved.	£30,000 - £70,000 for the flood protection study.	There are 206 residential and no non-residential properties at risk in a 200 year fluvial event within the benefitting area. A benefit PVD figure is not available from the ICM data provided. In addition, there is potential risk to a Primary School, and further community facilities.	£33,120,991	3	16 of 168	7 of 32	2 of 8	-	-	C1

Location	Objective	Next Step	Estimated Study Cost	Economic Benefits	PVD Damages	Mon-Monetised Score	Ranking (evidence based)			Ranking (local preference)	Reason	Proposed delivery cycle
Glasgow City Castlemilk PVA (11/14)	Reduce the risk of Spittal Burn / surface water flooding to residential properties in Castlemilk. Objective ID: 11020.	A flood protection study should be carried out to further investigate the following actions in detail, separately and in combination: construction of storage in Cathkin Braes Country Park and Glen Wood; modification of conveyance by upgrading a culvert at Ardencraig Road; and construction of an embankment along sections of the Spittal Burn. This study may also consider the NFM action, SUDs and the PLP action. SUDs may also be considered in the Castlemilk SWMP.	£30,000 - £70,000	There are 252 residential and 34 non-residential properties at risk in a 200 year fluvial event within the benefitting area. A benefit PVD figure is not available from the ICM data provided.	£45,983,512	2	19 of 168	10 of 32	4 of 8	-	-	C1
Falkirk ***Airth PVA (10/09)***	***Reduce economic damages to residential and non-residential properties and risk to people in Airth caused by coastal flooding. Objective ID: 10029, 10030.***	***A Flood Protection Study should assess Direct flood Defences and natural flood management (Surge Attenuation). The assessment should also consider these actions in combination and the impacts on flood risk upstream and downstream of each action.***	***£30k to £120k***	***108 residential properties and 5 non-residential properties at risk in a 200 year event with a PVD (damages avoided) of £19.1M***	***£19,100,000***	***9***	***20 of 168***	***2 of 27***	***2 of 5***	***3***	-	***C1***
Clackmannanshire Tillicoultry PVA (09/04)	Reduce economic damages to residential and non-residential properties in Tillicoultry caused by flooding from the River Devon and Tillicoultry Burn. Objective ID: 9010.	A Flood Protection Study should assess Flood Storage, Direct flood Defences and Sediment Management. The assessment should also consider these actions in combination and the impacts on flood risk upstream and downstream of each action.	£50k to £150k	319 residential properties and 95 non-residential properties at risk in a 200 year event with a PVD (damages avoided) of £13.2M	£13,200,000	8	21 of 168	1 of 5	1 of 2	-	-	C1
Angus ***Forfar PVA (08/05)***	***Reduce risk to people in Forfar from river flooding. Objective ID: 8011.***	***A Flood Protection / NFM / surface water study (starting in May 2015) should assess Flood Storage, Modification of Conveyance, Direct flood Defences and Sediment Management. Natural Flood Management should assess River/Floodplain Restoration and Sediment Management. The study should also include surface water investigations. The assessment will consider these actions in combination and the impacts on flood risk upstream and downstream of each action. There are ongoing discussions with Scottish Water to progress the surface water element.***	***£50k to £150k***	***45 residential properties and 28 non-residential properties at risk in a 200 year event with a PVD (damages avoided) of £12.8M***	***£12,800,000***	***8***	***21 of 168***	***1 of 7***	***1 of 6***	***3***	-	***C1***
Fife ***Kincardine PVA (10/08)***	***Reduce economic damages to residential and non-residential properties in Kincardine caused by river flooding and coastal flooding. Objective ID: 10027.***	***A Flood Protection Study should assess Flood Storage, Direct flood Defences and Sediment Management and Natural Flood Management. Natural Flood Management should assess Surge Attenuation. The assessment should also consider these actions in combination and the impacts on flood risk upstream and downstream of each action.***	***£30k to £120k***	***147 residential properties and 9 non-residential properties at risk in a 200 year event with a PVD (damages avoided) of £11.6M***	***£11,600,000***	***8***	***21 of 168***	***3 of 27***	***1 of 16***	***Medium priority***	***Flood Protection Scheme (old) in place.***	***C1***
Angus ***Monifeith PVA (07/10)***	***Reduce economic damages to residential and non-residential properties and risk to people in Monifieth caused by flooding from the Monifieth Burn. Objective ID: 7023.***	***A Flood Protection Study should assess Flood Storage, Direct flood Defences and Sediment Management. The assessment should also consider these actions in combination and the impacts on flood risk upstream and downstream of each action.***	***£30k to £100k***	***243 residential properties and 15 non-residential properties at risk in a 200 year event with a PVD (damages avoided) of £16.9M***	***£16,900,000***	***7***	***24 of 168***	***1 of 11***	***2 of 6***	***4***	-	***C1***
Perth & Kinross Pitlochry PVA (08/03)	Reduce economic damages to residential and non-residential properties in Pitlochry from the River Tummel and small watercourses. Objective ID: 8004.	A Flood Protection Study should assess Flood Storage, Sediment Management, Modification of Conveyance, Installation / modification of fluvial control structures and Property Relocation. The study should build on the 2007 draft Mouchel study and consider flooding from the small watercourses and the main river - this could be undertaken in conjunction with SEPA's Improved Understanding objectives for the river. The assessment should also consider these actions in combination and the impacts on flood risk upstream and downstream of each action.	£50k to £100k	121 residential properties and 47 non-residential properties at risk in a 200 year event with a PVD (do nothing) of £18.6M	£18,600,000	6	25 of 168	2 of 7	1 of 6	-	-	C1
Fife Cupar, Caults Mill PVA (07/18)	Reduce economic damages to residential and non-residential properties in Cupar caused by flooding from the River Eden and Lady Burn. Reduce risk to people from river flooding in Cults and Cupar. Objective ID: 7049, 7050, 7051.	A Flood Protection Study should assess Flood Storage, Direct flood Defences, Sediment Management and Property Relocation and Natural Flood Management. Natural Flood Management should assess River/Floodplain Restoration and Sediment Management. The assessment should also consider these actions in combination and the impacts on flood risk upstream and downstream of each action.	£30k to £120k	144 residential properties and 18 non-residential properties at risk in a 200 year event with a PVD (damages avoided) of £18.5M	£18,527,259	6	25 of 168	2 of 11	2 of 16	2	Study has been approved by Committee – political priority	C1

Location	Objective	Next Step	Estimated Study Cost	Economic Benefits	PVD Damages	Mon-Monetised Score	Ranking (evidence based)			Ranking (local preference)	Reason	Proposed delivery cycle
Scottish Borders ***Earlston PVA (13/05)***	***Reduce economic damages to residential and non-residential properties and flood risk to community facilities in Earlston caused by flooding from the Leader Water / Turfford Burn. Objective ID: 13019.***	***A Flood Protection Study for Earlson should be carried out to assess Modification of Conveyance, Installation / modification of fluvial control structures, Direct flood Defences and Sediment Management and Natural Flood Management. NFM should assess River/Floodplain Restoration and Sediment Management. The assessment should also consider the potential benefits and disbenefits to locations both upstream and downstream. The assessment should also consider these actions in combination and the impacts on flood risk upstream and downstream of each action.***	***£50k to £170k***	***61 residential properties and 43 non-residential properties at risk in a 200 year event with a PVD (damages avoided) of £15.5M. NFM has the potential to benefit 30 residential properties and 38 non residential properties are at risk for a high likelihood event and could benefit.***	***£15,500,000***	***6***	***25 of 168***	***2 of 5***	***2 of 6***	***3***	***-***	***C1***
Dumfries and Galloway Dalbeattie PVA (14/19)	Reduce the risk of river flooding to residential and non residential properties in Dalbeattie. Objective ID: 14025.	A flood protection study should be carried out to investigate further the improvement of the conveyance of the Kirkgunzeon Lane watercourse through Dalbeattie, and the improvement of direct flood defences on the Kirkgunzeon Lane watercourse in Dalbeattie. The study should determine the Standard of Protection of the existing defences, and should investigate the opportunity for improvement. The study should also consider Natural Flood Mangement and Property Level Protection.	£20-30K	There are 146 residential properties and 49 non-residential properties at risk in a 200 year river event, with a PVD of £13,933,540 (these figures apply to direct defences). This action may also offer protection to a stretch of the A711 and three electricity substations, however these are not included in the benefit figure	£13,933,540	6	25 of 168	2 of 11	2 of 10	2	-	C1
Dumfries and Galloway ***Whithorn PVA (14/24)*** ***Garlieston PVA (14/24)***	***Reduce the risk of coastal flooding to properties in Isle of Whithorn. Objective ID: 14121.*** ***Reduce the risk of coastal flooding to properties in Garlieston. Objective ID: 14032.***	***Initial assessment to refine knowledge of coastal flooding issues is to be made within the second Dumfries and Galloway Shoreline Management Plan. If the SMP identifies further work is required to mitigate current or future risk a flood protection study should be carried out. Based on initial assessment this should examine the benefit of direct flood defences along the coast at Garlieston and Isle of Whithorn. This study may also consider, property level protection actions and other complimentary actions.***	***£20,000 - £30,000***	***There are 74 residential properties and 20 non-residential properties at risk in a 200 year coastal event, with a PVD of £13,659,785.***	***£13,659,785***	***6***	***40 of 168***	***2 of 11***	***2 of 10***	***6***	***Coastal flood studies to be left to the 2nd cycle as Solway coastal flood warning will be active for 6 years, and will indicate if the studies are necessary. Coastal studies to rank lower in list.***	***C2***
Fife Linktown, Kirkcaldy PVA (10/05)	Reduce economic damages to residential and non-residential properties caused by river and coastal flooding. Reduce risk to people in Kirkcaldy from river flooding. Objective ID: 10015, 10016.	A Flood Protection Study should assess Flood Storage, Sediment Management, Modification of Conveyance, Direct flood Defences and Property Relocation as well as Natural Flood Management. Natural Flood Management should assess Runoff Control, River/Floodplain Restoration, Sediment Management and Wave Attenuation. The assessment should also consider these actions in combination and the impacts on flood risk upstream and downstream of each action.	£30k to £120k	42 residential properties and 50 non-residential properties at risk in a 200 year event with a PVD (damages avoided) of £13.0M.	£12,974,409	6	25 of 168	4 of 27	2 of 16	-	-	C1
Fife Newburgh PVA (07/14)	Reduce economic damages to residential and non-residential properties in Newburgh caused by coastal flooding. Objective ID: 7037.	A Flood Protection Study should assess Direct flood Defences and Natural Flood Management (Wave Attenuation). The assessment should also consider these actions in combination and the impacts on flood risk upstream and downstream of each action.	£30k to £120k	117 residential properties and 12 non-residential properties at risk in a 200 year event with a PVD (do nothing) of £12.3M	£12,300,000	6	25 of 168	2 of 11	2 of 16	High priority	-	C1
Fife Dunfermline PVA (10/06)	Reduce economic damages to residential and non-residential properties and risk to people in Dunfermline caused by flooding from the Lyne Burn and Tower Burn. Objective ID: 10019.	A Flood Protection Study should assess Modification of Conveyance, Sediment Management, Installation / modification of fluvial control structures, Direct flood Defences and Property Relocation as well as Natural Flood Management (Runoff Control and Sediment Management). The assessment should also consider these actions in combination and the impacts on flood risk upstream and downstream of each action.	£30k to £100k	59 residential properties and 31 non-residential properties at risk in a 200 year event with a PVD (damages avoided) of £12.0M	£12,000,000	6	25 of 168	4 of 27	2 of 16	-	-	C1

Location	Objective	Next Step	Estimated Study Cost	Economic Benefits	PVD Damages	Mon-Monetised Score	Ranking (evidence based)			Ranking (local preference)	Reason	Proposed delivery cycle
Dumfries and Galloway ***Moffat PVA (14/02)***	***Reduce the risk of river flooding to properties in Moffat. Objective ID: 14002.***	***Moffat Flood Study has been has identified potential works to mitigate flooding with Moffat including improvements to culverts and construction of flood defences. It is recommended that modelling of potential flooding in this area is updated and the viability of these actions is assessed within an economic appraisal. Given the complexity of flooding issues within the area further options may need to be considered during this study.***	***<£20K***	***There are 306 residential and 41 non-residential properties at risk during a 200 year river event, with a PVD of £11,026,154 (these figures are strategic and not taken from the study, and apply to direct defences). This action may also provide protection to short stretches of the A701 and A708, but this has not been included in the PVD figure***	***£11,026,154***	***6***	***25 of 168***	***2 of 11***	***2 of 10***	***3***	-	***C1***
Outer Hebrides Balivanich, Benbecula PVA (02/06)	Reduce risk in the Balivanich area from river and coastal flooding Objective ID: 200601.	A study is needed to confirm the business case and determine the extent and size of defences required. The study should be focused on Balivanich, but should also confirm the feasibility of defences in the Uachdar area. The study should include direct defences, channel modifications, improvements to the floodgate on the Uachdar drainage system (coastal management action), and consideration of property level protection for any residual flood risk. Other actions may also be considered to develop the most sustainable range of options.	£25,000 to £50,000	The solution could potentially reduce the impact of flooding to 97 residential and 4 non-residential properties which are currently at medium likelihood of flooding. Benefits of £14,650,184 could be achieved over a 100 year design life of a flood scheme.	£14,650,184	5	34 of 168	1 of 5	1 of 5	1	Agree that technical ranking is a fair representation of flood risk in the Outer Hebrides	C1
North Ayrshire Brodick/ Lamlash PVA (12/08)	Reduce the risk of river / coastal flooding to residential properties in Brodick and Lamlash. Objective ID: 12023.	The Ayrshire Shoreline Management Plan will be carried out in partnership with NAC, SAC, SEPA and SNH which will further assess flood issues in the area. This plan will also include consideration of natural flood management actions. A flood protection study should also be carried out to further assess the coastal risk within the area and fluvial risk from the Glen Cloy Burn in Brodick and the Benlister Burn and Monamore Burn in Lamlash. This study should look at the interaction between sources and look to develop mitigation options .While the largest concentrations of risk is in Brodick and Lamalash there are properties at risk between the two towns. The studies should also investigate the use of NFM techniques and Property Level Protection to complement other actions.	£30,000 - £50,000	There are 178 residential and 31 non-residential properties at risk in a 200 year coastal event within area with a PVD of £12,273,658. Of these there are 15 residential properties and 19 non residential properties at risk of flooding in Brodick. There are 43 residential properties and 7 non residentrial properties in Lamlash at risk of flooding.	£20,258,470	3	35 of 168	2 of 12	2 of 5	-	-	C1
Glasgow City Yoker Mains/ Yoker Burn PVA (11/05)	Reduce the risk of river / surface water flooding to residential properties, non residential properties and transport (roads) in Yoker Mains and Yoker Burn catchments. Objective ID: 11016.	A flood protection study should be carried out to further investigate in detail the construction of direct defences along both banks of the Yoker and Garscadden Burns. This study may also consider the NFM, SUDs and PLP actions. SUDs may also be assessed in the Yokermain Burn SWMP.	£30,000 - £50,000	There are 127 residential and 2 non-residential properties at risk in a 200 year fluvial event within the benefitting area of this action. A benefit PVD figure is not available from the ICM data provided.	£20,740,815	2	36 of 168	11 of 32	5 of 8	-	-	C1
East Ayrshire Kilmarnock PVA (12/06)	Reduce the risk of flooding from the River Irvine and Kilmarnock Water in Kilmarnock. Objective ID: 12015.	East Ayrshire Council are to assess the current standard of protection of existing defences and assess where they can be enhanced to provide a better standard of protection. This assessment may also consider the property level protection action.	To be assessed by the Local Authority.	The defences are currently thought to have a standard of protection of 1 in 100yr. If these defences were not in place there is potential flooding to over 1000 properties in a 1 in 200yr flood.	£24,334,200	1	37 of 168	3 of 12	1 of 4	1	-	C1
Fife ***Leven PVA (10/03)***	***Reduce economic damages to residential and non-residential properties and risk to people in Leven caused by flooding from the River Leven and Scoonie Burn. Objective ID: 10006.***	***A Flood Protection Study should assess Flood Storage (Scoonie Burn), Modification of Conveyance, Direct flood Defences and Sediment Management. Natural Flood Management should assess River/Floodplain Restoration and Sediment Management. The assessment should also consider these actions in combination and the impacts on flood risk upstream and downstream of each action.***	***£30k to £120k***	***26 residential properties and 52 non-residential properties at risk in a 200 year event with a PVD (damages avoided) of £8.3M***	***£8,303,061***	***10***	***38 of 168***	***6 of 27***	***6 of 16***	***Low LA priority***	***Risk mostly industrial***	***C1***

Location	Objective	Next Step	Estimated Study Cost	Economic Benefits	PVD Damages	Mon-Monetised Score	Ranking (evidence based)			Ranking (local preference)	Reason	Proposed delivery cycle
Stirling Aberfoyle PVA (09/01)	Reduce economic damages to residential and non-residential properties in Aberfoyle caused by flooding from the River Forth. Objective ID: 9002.	A Flood Protection Study has been carried out assessing flood storage and sediment management. There is no economically viable option for the design standard of protection (BCR = 0.37) and a 5 year SOP scheme is being self-funded. The study can be revisited in future in order to determine options for higher return periods and following discussions concerning Flood Warning with SEPA.	£30k to £100k	62 residential properties and 46 non-residential properties at risk in a 200 year event with a PVD (do nothing) of £9.33M	£9,330,000	8	39 of 168	2 of 5	1 of 2	-	-	C1
South Lanarkshire Strathaven PVA (11/17/1)	Reduce the risk of river / surface water flooding to residential properties, non residential properties, community facilities and transport in Strathaven. Objective ID: 11071.	A flood protection study should be carried out to further investigate the following actions in detail, separately and in combination: storage from the Powmillon Burn; improving the conveyance through existing structures on the Powmillon Burn; modification of the existing weirs at Strathaven Park and the Old Mill; and construction of flood defences along the Powmillon Burn within Strathaven. SUDs should be assessed in any future flood study undertaken in the area. This study may also consider the NFM and PLP actions.	£30,000 - £50,000	There are 39 residential and 34 non-residential properties at risk in a 200 year river event, with a PVD of £10,143,029. This action may also protect 240m of A road, an electricity substation and a police station.	£10,143,029	7	40 of 168	12 of 32	2 of 4	-	-	C1
Glasgow City Shawfield PVA (11/14)	Reduce the risk of combined flooding to residential properties and non residential properties in Shawfield. Objective ID: 11022.	The potential for construction of storage, modification of conveyance and construction of direct flood defences should be further considered in detail in the Shawfield Masterplan. SUDs should be considered in the Shawfield Masterplan and / or the Rutherglen SWMP. There should be coordination between Glasgow City Council and South Lanarkshire Council when undertaking schemes in the Rutherglen / Shawfield areas. GCC to look if any further work is required above the Clyde Gateway masterplan at Shawfield - potential link with 110650005 - South Lanarkshire study	0	There are 142 residential and 64 non-residential properties at risk in a 200 year fluvial event within the benefitting area of these actions with a PVD of £9,739,778. This action may also benefit two gas regulating utilities and 300m of A roads which are not included in this PVD figure.	£9,739,778	6	41 of 168	13 of 32	6 of 8	-	-	C1
Perth & Kinross Aberfeldy PVA (08/03)	Reduce economic damages to residential and non-residential properties in Aberfeldy from the River Tay and Moness Burn. Objective ID: 8005.	A Flood Protection Study should assess Installation / modification of fluvial control structures, Direct flood Defences and Sediment Management. The assessment should also consider these actions in combination and the impacts on flood risk upstream and downstream of each action. Study has been approved by committee but still awaiting funding.	£50k to £100k	104 residential properties and 44 non-residential properties at risk in a 200 year event with a PVD (damages avoided) of £8.7M	£8,700,000	6	41 of 168	3 of 7	2 of 6	-	-	C1
Scottish Borders ***Jedburgh PVA (13/10)***	***Reduce economic damages to residential and non-residential properties and flood risk to community facilities in Jedburgh caused by flooding from the Jed Water and Skiprunning Burn. Objective ID: 13026.***	***A Flood Protection Study should assess Modification of Conveyance, Installation / modification of fluvial control structures, Direct flood Defences, Sediment Management and Natural Flood Management. NFM Study should assess run-off control and sediment management. The assessment should consider these actions in combination and the impacts on flood risk upstream and downstream of each action.***	***£50k to £170k***	***59 residential properties and 69 non-residential properties at risk in a 200 year event with a PVD (damages avoided) of £10.9M.***	***£10,900,000***	***5***	***43 of 168***	***3 of 5***	***3 of 6***	***5***	***Not immediate local priority as Jed Water FP scheme will provide benefit.***	***C2***
Glasgow City NW Glasgow PVA (11/04)	Reduce the risk of River Kelvin / surface water flooding to residential properties, non residential properties and community facilities in west and north west Glasgow. Objective ID: 11014.	A study is currently underway to model the River Kelvin and assess the current flood risk; it is being carried out in partnership between East Dunbartonshire Council, Glasgow City Council and SEPA. The outcomes from this study should be carried forward to a flood protection study which should further investigate the following actions in detail, separately and in combination: construction of storage at Glasgow Golf Club and Dawsholm Park; modification of conveyance by deepening the channel at a number of bridges along the River Kelvin; and construction of direct flood defences at a number of locations along the right bank of the River Kelvin. PLP and SUDs may be considered in this study. SUDs may also be assessed within the Glasgow SWMP.	£50,000 - £100,000	There are 138 residential and 29 non-residential properties at risk in a 200 year fluvial event with a PVD of £10,021,319. This action may also benefit an electricity substation and 100m of railway track which are not included in this PVD figure.	£10,021,319	5	43 of 168	14 of 32	7 of 8	-	-	C1

Location	Objective	Next Step	Estimated Study Cost	Economic Benefits	PVD Damages	Mon-Monetised Score	Ranking (evidence based)			Ranking (local preference)	Reason	Proposed delivery cycle
Falkirk ***Denny/ Dunipace PVA (10/11)***	***Reduce economic damages to residential and non-residential properties in Denny/ Dunipace caused by flooding from the River Carron, Avon Burn and Castlerankine Burn. Objective ID: 10038.***	***An initial Flood Protection Study is underway which incorporates modelling work (due to report in 2016). Further study will be needed to assess options to manage flood risk including Direct flood Defences, Sediment Management and Natural Flood Management (Runoff control and Sediment Management). The assessment should also consider these actions in combination and the impacts on flood risk upstream and downstream of each action.***	***£30k to £120k***	***155 residential properties and 12 non-residential properties at risk in a 200 year event with a PVD (damages avoided) of £8.6M. NFM actions could benefit 49 residential properties and 1 non residential properties which are at risk for a high likelihood event.***	***£8,600,000***	***5***	***43 of 168***	***7 of 27***	***3 of 5***	***4***	***-***	***C1***
Moray ***Seatown PVA (05/02)***	***Reduce economic damages and flood risk to the Seatown area of Lossiemouth from river and coastal flooding Objective ID: 500201.***	***A flood protection study is recommended to consider a scheme for Seatown in Lossiemouth. The scheme should include investigation of direct defences to reduce the risk of flooding from the river and sea. Other actions may also be considered to develop the most sustainable range of options.***	***£50,000 - £100,000***	***A scheme could potentially reduce risk to 80 residential properties and 2 non-residential properties at medium likelihood of flooding. The benefits of protecting the properties at risk are potentially £8.4M.***	***£8,400,000***	***5***	***43 of 168***	***1 of 6***	***1 of 2***	***2***	***Local Authority note that based on the flood history, Portgordon should be a higher priority but wish to promote both studies in Cycle 1.***	***C1***
Perth & Kinross Blackford PVA (09/12c)	Reduce economic damages to residential and non-residential properties in Blackford caused by flooding from the Allan Water, Danny Burn, Burn of Ogilvie, Back Burn and Kinpauch Burn. Objective ID: 9031.	A Flood Protection Study should assess Direct flood defences, Modification of Conveyance, Sediment Management and Natural Flood Management. Natural Flood Management should include Runoff control and Sediment Management. The assessment should also consider these actions in combination and the impacts on flood risk upstream and downstream of each action.	£50k to £150k	50 residential properties and 17 non-residential properties at risk in a 200 year event with a PVD (damages avoided) of £7.7M. 28 residential properties and 5 non residential properties are at risk for a high likelihood event and could benefit from NFM actions.	£7,725,514	5	43 of 168	3 of 5	3 of 6	-	-	C1
North Ayrshire Kilwinning PVA (12/05)	Reduce the risk of the Bannoch Burn / River Garnock / Wood Burn flooding to residential properties and non residential properties in Kilwinning. Objective ID: 12013.	As part of the Stevenston Point Integrated Catchment Management Study further hydraulic modelling will be undertaken on the Wood Burn. Upgrading of culverts on the Wood Burn will be appraised as part of that detailed study. However, a flood protection study should be carried out to further investigate the following actions in detail, separately and in combination: modification of control structures by removing a weir; and construction of a river wall along the River Garnock. This study may also consider the NFM, SUDs and property level protection actions.	£30,000 - £50,000 for the flood protection study	There are 85 residential and 5 non-residential properties at risk in a 200 year coastal event within the benefitting area of the storage action with a PVD of £7,051,675. This action may also benefit 250m of primary roads which are not included in this PVD figure.	£7,051,675	5	43 of 168	4 of 12	3 of 5	-	-	C1
East Dunbartonshire Milngavie PVA (11/04)	Reduce the risk of Allander Water / surface water flooding to residential properties and non residential properties in Milngavie. Objective ID: 11011.	A flood protection study should be carried out to investigate further the construction of direct defences along the Allander Water in Milngavie. This study may also consider the NFM and PLP actions.	£30,000 - £50,000	There are 58 residential and 23 non-residential properties at risk from a 200 year river event, with a PVD of £10,450,898.	£10,450,898	4	49 of 168	15 of 32	2 of 2	2	-	C1
East Renfrewshire Barrhead PVA (11/13)	Reduce the risk of river / surface water flooding to residential properties and non residential properties in Barrhead. Objective ID: 11013.	A flood protection study should be carried out to investigate further the potential for sections of direct defences along the watercourses in Barrhead. This study may also consider the NFM action, if not covered in a White Cart Water catchment wide study, and the PLP action.	£20,000 - £30,000	There are 126 residential and 28 non-residential properties at risk during a 200 year river event, with a PVD of £10,265,380. This action may also protect three electricity substations and a gas regulating utility; however these have not been included in the PVD figure.	£10,265,380	4	49 of 168	15 of 32	1 of 2	1	-	C1

Location	Objective	Next Step	Estimated Study Cost	Economic Benefits	PVD Damages	Mon-Monetised Score	Ranking (evidence based)			Ranking (local preference)	Reason	Proposed delivery cycle
Highland Kingussie PVA (05/12)	Reduce economic damages and flood risk to Kingussie from the Gynack Burn Objective ID: 501201.	A flood protection study is recommended to identify a combination of effective mitigation measures from upstream storage in Loch Gynack, direct defences through Kingussie and widening of the railway bridge to improve conveyance as well as sediment management. Other actions may also be considered to reach the most sustainable options.	£ 50,000 - £100,000	Flood protection works could reduce risk to 36 residential properties and 16 non-residential properties at medium likelihood of flooding. Present value benefits of £1,839,873 could be achieved over the 100 year design life of a flood scheme. The study should be carried out alongside the natural flood management study; which may provide additional benefits that cannot be quantified at this stage.	£8,360,638	4	49 of 168	2 of 6	2 of 23	2	Should be taken forward at an early stage to allow potential measure to be taken forward in conjunction with a proposed hydro scheme	C1
Highland ***Nairn Central PVA (01/18)***	***Reduce flood risk in Nairn Central from the River Nairn*** ***Reduce risk in Nairn Central from coastal flooding Objective ID: 101801, 101802.***	***A study is recommended to look at direct defences, but other actions may also be considered in order to develop the most sustainable range of options.***	***£25,000 to £50,000***	***Flood protection works could reduce the impact of the flooding of 344 residential and 24 non-residential properties which are currently at medium likelihood of flooding. Benefits of £7,685,435 could potentially be achieved over 100 year design life of a flood scheme.***	***£7,685,435***	***4***	***49 of 168***	***3 of 22***	***2 of 23***	***5***	***Should be lower due to low flood frequency.***	***C1***
Highland Tarbat Ness peninsula PVA (01/08)	Reduce risk in Inver and Skinnerton from coastal flooding Reduce risk in Balintore from coastal flooding Reduce risk in Portmahomack from coastal flooding Reduce risk in Rockfield from coastal flooding Objective ID: 100801, 100802, 100803, 100804.	A study is recommended to further investigate the feasibility of a flood protection scheme for Tarbat Ness. This may involve different solutions in different locations. The impact of waves on flood risk should be explored. The study should focus onrevetments, direct defences, offshore breakwater, relocation and property level protection, but other actions may also be considered in order to develop the most sustainable range of options.	£50,000 to £75,000	Present value benefits of £8,039,607 could be achieved over the 100 year design lives of flood schemes in all four locations.	£8,039,607	3	53 of 168	4 of 22	4 of 23	4	Local knowledge and preferences.	C1
Angus ***Dundee PVA (07/11)***	***Reduce economic damages to residential and non-residential properties and risk to people in Dundee caused by flooding from the Dighty Water and Fithy Burn. Objective ID: 7027.***	***This study is a LPD priority; Angus Council to lead and work in collaboration with Dundee City Council. A Flood Protection / NFM Study should assess Direct flood Defences and Sediment Management. Natural Flood Management should investigate River/Floodplain Restoration and Sediment Management. The assessment should also consider these actions in combination and the impacts on flood risk upstream and downstream of each action. Part of the study requirements may be met by the ICS.***	***£30k to £120k***	***534 residential properties and 138 non-residential properties at risk in a 200 year event with a PVD (damages avoided) of £5.8M***	***£5,800,000***	***9***	***54 of 168***	***4 of 11***	***3 of 6***	***2***	***Collaboration with Dundee City Council for whom this is high priority.***	***C1***
Aberdeenshire ***Ellon PVA (06/12)***	***Reduce flood risk in Ellon from the River Ythan*** ***Reduce flood risk in Ellon from the Modley Burn*** ***Reduce flood risk in Ellon from the Broomies / Bronie Burn Objective ID: 601201, 601202, 601203.***	***A flood protection study is recommended to consider flood protection works to reduce the likelihood of flooding in Ellon from the River Ythan, Modley Burn and Broomis / Bronie Burn. The flood protection study should focus on direct defences, online/offline storage, sediment management (especially on Modley Burn and Broomies Burn), modification of conveyance on the Broomies Burn, relocation of properties and property level protection to reduce the likelihood of flooding. Any other actions may also be considered to develop the most sustainable range of options.***	***£50,000 - £100,000***	***Flood protection works could potentially reduce risk to 77 residential properties and 18 non-residential properties. Based on the properties identified to be at risk, £6,103,746 of benefits over 100 years could be achieved through reducing medium likelihood floods.***	***£6,103,746***	***8***	***55 of 168***	***4 of 16***	***1 of 12***	***4***	***Local understanding of flood risk and flood history***	***C1***
East Ayrshire *Catrine PVA (12/14)*	*Reduce the risk of River Ayr flooding to residential properties and non residential properties in Catrine. Objective ID: 12030.*	*A flood protection study should be carried out to further investigate in detail the construction of a river wall along sections of the River Ayr. Property level protection and SUDs should be assessed in any future flood study undertaken in the area.*	*£30,000 - £50,000*	*There are 111 residential and 45 non-residential properties at risk in a 200 year fluvial event within the benefitting area of this action with a PVD of £5,789,683. This action may also benefit two electricity substations which are not included in this PVD figure.*	*£5,789,683*	*8*	*55 of 168*	*5 of 12*	*2 of 4*	*3*	*-*	*C1*

Location	Objective	Next Step	Estimated Study Cost	Economic Benefits	PVD Damages	Mon-Monetised Score	Ranking (evidence based)			Ranking (local preference)	Reason	Proposed delivery cycle
Aberdeenshire *Inverurie and Port Elphinstone PVA (06/13)*	*Reduce flood risk in Inverurie and Port Elphinstone from the River Don Reduce flood risk in Inverurie and Port Elphinstone from the River Urie Objective ID: 601301, 601302.*	*A flood protection study is recommended to develop previous work to consider flood protection works to reduce the likelihood of flooding in Inverurie and the Port of Elphinstone from the River Don and River Urie. The study should cover flood risk from all watercourses in Inverurie and the Port of Elphinstone. Properties at risk from the River Don may also be at risk from the River Urie. The flood protection study should focus on modifications to the bridges to improve conveyance, the construction of direct defences, online/offline storage, relocation of properties and property level protection to reduce the likelihood of flooding. Other actions may also be considered to develop the most sustainable range of options.*	*£50,000 - £100,000*	*Flood protection works could potentially reduce risk to 120 residential properties and 35 non-residential properties. Based on the properties identified to be at risk, £6,813,979 of benefits over 100 years could be achieved through reducing medium likelihood flooding.*	*£6,813,979*	*7*	*57 of 168*	*5 of 16*	*2 of 12*	*1*	*Local understanding of flood risk and flood history*	*C1*
City of Edinburgh *Edinburgh: Niddrie Burn PVA (10/20)*	*Reduce economic damages to residential and non-residential properties and risk to people in Edinburgh/ Burdiehouse caused by flooding from the Niddrie Burn. Objective ID: 10071.*	*A Flood Protection Study should assess Flood Storage, Modification of Conveyance, Installation / modification of fluvial control structures, Direct flood Defences and Sediment Management. The assessment should also consider these actions in combination and the impacts on flood risk upstream and downstream of each action. This study should aim to improve gauging on the Niddrie/Burdiehouse Burn catchment. Local Authority and SEPA to determine the best way forward.*	*£30k to £100k*	*178 residential properties and 19 non-residential properties at risk in a 200 year event with a PVD (damages avoided) of £6.8M. 1 community facility (hospital) currently at risk of flooding.*	*£6,800,000*	*7*	*57 of 168*	*8 of 27*	*1 of 3*	*2*	*-*	*C1*
Fife *St Andrews PVA (07/16 & 07/17)*	*Reduce economic damages to residential and non-residential properties and risk to people in St. Andrews caused by flooding from the Kinness Burn. Objective ID: 7042, 7046.*	*A Flood Protection Study for Kinness Burn was carried out in 2007 followed by berm investigations in 2011. Further study is required to reassess options to manage flood risk in St Andrews. This study should assess Installation / modification of fluvial control structures, Direct flood Defences, Sediment Management and Natural Flood Management including Runoff control, River/Floodplain Restoration and Sediment Management. The assessment should also consider these actions in combination and the impacts on flood risk upstream and downstream of each action.*	*£30k to £120k*	*127 residential properties and 6 non-residential properties at risk in a 200 year event with a PVD (damages avoided) of £6.1M*	*£6,100,000*	*7*	*57 of 168*	*5 of 11*	*7 of 16*	*1*	*Council aiming to complete works also in C1 so study is a priority*	*C1*
Angus Montrose PVA (07/04)	Reduce economic damages to residential and non-residential properties and risk to people in Montrose caused by coastal flooding. Objective ID: 7007, 7008.	A Flood Protection / NFM Study should assess Direct flood Defences. Natural Flood Management study should assess Wave Attenuation and Surge Attenuation. The assessment should also consider these actions in combination and the impacts on flood risk upstream and downstream of each action.	£50 - £120K	104 residential properties and 43 non-residential properties at risk in a 200 year event with a PVD (damages avoided) of £5.2M	£5,200,000	7	57 of 168	5 of 11	4 of 6	6	-	C1
Dumfries and Galloway *Kirkcudbright PVA (14/22)*	*Reduce the risk of coastal flooding to properties in Kirkcudbright. Objective ID: 14029.*	*Initial assessment to refine knowledge of coastal flooding issues is to be made within the second Dumfries and Galloway Shoreline Management Plan. If the SMP identifies further work is required to mitigate current or future risk a flood protection study should be carried out. Based on initial assessment this should examine the benefit of direct flood defences along the River Dee in Kirkcudbright. The study should take into account the interaction of the River Dee with coastal levels downstream, and the Scottish Water hydro scheme upstream. This study may also consider natural flood management, property level protection actions and other complimentary actions.*	*£30,000 - £50,000*	*There are 85 residential properties and 19 non-residential properties at risk in a 200 year coastal event, with a PVD of £6,378,065. This action may also offer benefit to a stretch of the A755, however this has not been included in the PVD figure.*	*£6,378,065*	*6*	*61 of 168*	*5 of 11*	*5 of 10*	*8*	*Coastal flood studies to be left to the 2nd cycle as Solway coastal flood warning will be active for 6 years, and will indicate if the studies are necessary. Coastal studies to rank lower in list.*	*C2*

Location	Objective	Next Step	Estimated Study Cost	Economic Benefits	PVD Damages	Mon-Monetised Score	Ranking (evidence based)			Ranking (local preference)	Reason	Proposed delivery cycle
Aberdeenshire ***Insch PVA (06/11)***	***Reduce flood risk in Insch from The Shevoch*** ***Reduce flood risk in Insch from the Valentine Burn Objective ID: 601101, 601102.***	***A flood protection study is recommended to consider flood protection works to reduce the likelihood of flooding in Insch from The Shevoch and Valentine Burn. The flood protection study should focus on modifications to the bridges to improve conveyance, the construction of direct defences, river or floodplain restoration, relocation of properties and property level protection to reduce the likelihood of flooding. Other actions may also be considered to develop the most sustainable range of options.***	***£50,000 - £100,000***	***Flood protection works could potentially reduce risk to 52 residential properties and 20 non-residential properties. Based on the properties identified to be at risk, £6,304,791 of benefits over 100 years could be achieved through reducing medium likelihood floods.***	***£6,304,791***	***6***	***61 of 168***	***6 of 16***	***3 of 12***	***2***	***Local understanding of flood risk and flood history***	***C1***
East Lothian ***Cockenzie, Port Seton, Prestonpans PVA (10/23)***	***Reduce economic damages to residential and non-residential properties caused by river and coastal flooding. Objective ID: 10080.***	***A Flood Protection Study should assess Modification of Conveyance, Installation / modification of fluvial control structures, Direct flood Defences and Sediment Management. Natural Flood Management should assess Wave Attenuation. The assessment should also consider these actions in combination and the impacts on flood risk upstream and downstream of each action.***	***£30k to £120k***	***63 residential properties and 14 non-residential properties at risk in a 200 year event with a PVD (damages avoided) of £6.2M***	***£6,236,581***	***6***	***61 of 168***	***9 of 27***	***1 of 3***	***3***	***No known fluvial issues to the LA. Known coastal issues.***	***C1***
Dumfries and Galloway ***Annan PVA (14/08)***	***Reduce the risk of coastal flooding to residential and non residential properties in Annan. Objective ID: 14011.***	***Initial assessment to refine knowledge of coastal flooding issues is to be made within the second Dumfries and Galloway Shoreline Management Plan. If the SMP identifies further work is required to mitigate current or future risk a flood protection study should be carried out. Based on initial assessment this should examine the benefit direct flood defences along the River Annan in Annan. This study may also consider property level protection actions and other complimentary actions.***	***£20,000 - £30,000***	***There are 96 residential and 25 non-residential properties at risk of flooding during a 200 year coastal event, with a PVD of £6,067,737. This action may also benefit a stretch of multitrack railway, however this has not been included in the PVD figure.***	***£6,067,737***	***6***	***61 of 168***	***5 of 11***	***5 of 10***	***7***	***Coastal flood studies to be left to the 2nd cycle as Solway coastal flood warning will be active for 6 years, and will indicate if the studies are necessary. Coastal studies to rank lower in list.***	***C2***
Clackmannanshire Menstrie PVA (09/04)	Reduce economic damages to residential and non-residential properties, flood risk to community facilities and risk to people in Menstrie caused by flooding from the Menstrie Burn. Objective ID: 9011, 9013.	A Flood Protection / NFM study should be carried out for Menstrie. Initial study has been completed following flood on 29/08/12. Most of the short term / maintenance related matters identified in the study have been addressed. Further information (rainfall and gauge data for the catchment) is being gathered to inform further modelling and consequent economic appraisal of possible direct defences. The study might lead to implementation of actions at later stages of FRM cycle, subject to funding availability. NFM component should build on existing NFM work but look at the wider catchment area. It should examine run-off control and sediment management.	£30k to £120k	149 residential properties and 10 non-residential properties at risk in a 200 year event with a PVD (damages avoided) of £5.8M. 35 residential properties are at risk from high likelihood event and may benefit from NFM	£5,800,000	6	61 of 168	4 of 5	2 of 2	-	-	C1
Scottish Borders ***Eyemouth PVA (10/26)***	***Reduce economic damages to residential and non-residential properties in Eyemouth caused by coastal flooding. Objective ID: 10084.***	***A Flood Protection Study should be carried out in conjunction with NFM and Shoreline management plan (2016 - 2018). The combined study should assess the following: Direct flood Defences, Sediment Management and Wave Attenuation. The assessment should also consider these actions in combination and the impacts on flood risk upstream and downstream of each action.***	***£50k to £170k***	***34 residential properties and 21 non-residential properties at risk in a 200 year event with a PVD (damages avoided) of £5.7M***	***£5,701,885***	***5***	***66 of 168***	***10 of 27***	***4 of 6***	***1***	***LA priority as shoreline management plan confirmed to go ahead.***	***C1***
Perth & Kinross Dunkeld PVA (08/08)	Reduce economic damages to residential and non-residential properties in Dunkeld from River Tay and River Braan. Objective ID: 8017.	A Flood Protection Study should assess Modification of Conveyance, Direct flood Defences and Sediment Management. The assessment should also consider these actions in combination and the impacts on flood risk upstream and downstream of each action. The study should build on existing investigations by Mouchel and will take a staged approach to allow collaboration with SEPA on Improved Understanding objective for Tay.	£50k to £100k	179 residential properties and 74 non-residential properties at risk in a 200 year event with a PVD (do nothing) of £5.8M	£5,800,000	4	67 of 168	4 of 7	4 of 6	-	-	C1
West Lothian ***Whitburn PVA (10/29c)***	***Reduce economic damages to residential and non-residential properties in Whitburn caused by flooding from the White Burn. Objective ID: 10094.***	***A Flood Protection Study should assess Modification of Conveyance, Direct flood Defences and Sediment Management. The assessment should also consider these actions in combination and the impacts on flood risk upstream and downstream of each action.***	***£30k to £100k***	***137 residential properties and 1 non-residential properties at risk in a 200 year event with a PVD (damages avoided) of £5.4M***	***£5,400,000***	***3***	***68 of 168***	***11 of 27***	***1 of 4***	***2***	***-***	***C1***

Location	Objective	Next Step	Estimated Study Cost	Economic Benefits	PVD Damages	Mon-Monetised Score	Ranking (evidence based)			Ranking (local preference)	Reason	Proposed delivery cycle
Highland ***Muir of Ord PVA (01/16)***	***Reduce flood risk in Muir of Ord from the Allt Fionnaidh / Logie Burn and Ord Loch Objective ID: 101601.***	***Currently the flood risk for the Muir of Ord is thought to be overestimated due to difficulties in modelling how the Ord Loch interacts with the surrounding watercourses. Improvements to the modelling are required to confirm the extent of flood risk in Muir of Ord and the surrounding rural areas. A hydraulic study should focus on Ord Loch and how it interacts with the surrounding watercourses.***	***£25,000 to £50,000***	***Currently the modelling is thought to overestimate the impact of flooding. Improved understanding of the flood extents will allow the potential benefits for any flood works to be confirmed. Based on existing flood risk and hazard maps present value benefits of £6,377,790 could be achieved over the 100 year design life of a flood scheme. The potential benefits are likely to be lower if flood risk is overestimated.***	***£6,377,790***	***2***	***69 of 168***	***5 of 22***	***5 of 23***	***12***	***The flood risk in Muir of Ord is overestimated.***	***C2***
Fife Cardenden PVA (10/28c)	Reduce economic damages to residential and non residential properties from river flooding in Cardenden (Bowhill). Objective ID: 10097.	A Flood Protection Study should assess Flood Storage, Direct flood Defences, Sediment Management and Natural Flood Management. The assessment should also consider these actions in combination and the impacts on flood risk upstream and downstream of each action.	£30k to £100k	55 residential properties and 5 non-residential properties at risk in a 200 year event with a PVD (damages avoided) of £4.7M	£4,700,000	7	70 of 168	12 of 27	8 of 16	-	-	C1
Fife Cairneyhill PVA (10/07)	Reduce economic damages to residential and non-residential properties caused by river and coastal flooding. Objective ID: 10025.	A Flood Protection Study should assess Sediment Management, Modification of Conveyance, Installation / modification of fluvial control structures, Direct flood Defences and Property Relocation. Natural Flood Management should assess Runoff control and Sediment Management. The assessment should also consider these actions in combination and the impacts on flood risk upstream and downstream of each action.	£30k to £120k	38 residential properties and 6 non-residential properties at risk in a 200 year event with a PVD (damages avoided) of £4.6M.	£4,600,000	7	70 of 168	12 of 27	8 of 16	-	-	C1
Perth & Kinross Scone PVA (08/11)	"Reduce economic damages to residential and non-residential properties caused by river flooding. Reduce economic damages and number of residential properties at risk of surface water flooding as far as practical. Objective ID: 8023, 8021	The Council engaged Mouchel to carry out a flood protection study for the Annaty Burn in Scone in 2007. This study identified a viable flood scheme and this is included on the prioritised list of flood protection works. A further study has now been identified and should consider NFM and also develop a SWMP. Natural Flood Management should assess River/Floodplain Restoration and Sediment Management. The assessment should also consider the potential benefits and disbenefits to locations both upstream and downstream. This study should be progressed to inform the proposed flood protection works on the Annaty Burn. The Council carried out a Flood Protection Study for the barrel drain in Scone in 2007 which did not identify a viable flood scheme. However the Council intends to re-examine this previous study following recent failures of the drain and this will be carried out in conjunction with this new study.	£50k to £150k	56 residential properties and 58 non-residential properties at risk in a 200 year event (fluvial / surface water) with a PVD of £4.8M	£4,846,878	6	72 of 168	5 of 7	5 of 6	-	-	C1
Dumfries and Galloway ***Kirkconnel PVA (14/01)***	***Reduce the risk of river flooding to properties in Kirkconnel. Objective ID: 14001.***	***A flood protection study has been commissioned by Dumfries & Galloway Council. This study should assess the modification of conveyance and the construction of direct flood defences on the River Nith and Polbower Burn in Kirkconnel. There are flooded properties within Kirkconnel that may be suitable for relocation, and this should be considered in the flood study. The study may also consider property level protection. The study should take into consideration the planned actions for New Cumnock upstream and actions as part of the pilot catchment study on the Nith.***	***£20-30K***	***The detailed study will produce more accurate figures, however the strategic economic impacts are: 91 residential and 5 non-residential properties at risk in a 200 year river event, with a PVD of £4,777,951 (figures apply to both direct defences and modification of conveyance). This action may also provide protection to a short stretch of the primary road A76, however this has not been included in the PVD figure***	***£4,777,951***	***6***	***72 of 168***	***7 of 11***	***7 of 10***	***4***	***-***	***C1***

Location	Objective	Next Step	Estimated Study Cost	Economic Benefits	PVD Damages	Mon-Monetised Score	Ranking (evidence based)			Ranking (local preference)	Reason	Proposed delivery cycle
Fife Auchtermuchty PVA (07/19)	Reduce economic damages to residential and non-residential properties in Auchtermuchty caused by flooding from the Auchtermuchty Burn. Objective ID: 7052.	A scheme is in place that reduced some of the identified risk. A study was carried out but did not identify a viable scheme here. If required, a future Flood Protection Study should assess Flood Storage, Sediment Management, Property Relocation and Natural Flood Management. Natural Flood Management should assess River/Floodplain Restoration and Sediment Management. The assessment should also consider these actions in combination and the impacts on flood risk upstream and downstream of each action.	£50k to £150k	44 residential properties and 13 non-residential properties at risk in a 200 year event with a PVD (do nothing) of £4.67M. 60 residential properties and 0 non residential properties are at risk for a high likelihood event and could benefit from NFM actions.	£4,670,000	6	72 of 168	7 of 11	10 of 16	-	-	C1
Angus ***Carnoustie PVA (07/09)***	***Reduce economic damages to residential and non-residential properties in Carnoustie caused by flooding from the Barry Burn and coastal flooding. Objective ID: 7022.***	***This study is a local priority. A Flood Protection Study has started to be progressed and investigates Flood Storage, Modification of Conveyance, Installation / modification of fluvial control structures, Direct flood Defences and Sediment Management. The potential for Natural Flood Management is being assessed: River/Floodplain Restoration, Sediment Management and Wave Attenuation. The assessment is considering these actions in combination and the impacts on flood risk upstream and downstream of each action and recognising that the existing defences may not operate to the design standard.***	***£30k to £120k***	***37 residential properties and 8 non-residential properties at risk in a 200 year event with a PVD (damages avoided) of £5.0M***	***£5,000,000***	***5***	***75 of 168***	***8 of 11***	***5 of 6***	***1***	***Study ongoing. Existing defences may not operate at design standard.***	***C1***
South Ayrshire Girvan PVA (12/18)	Reduce the risk of river / coastal flooding to residential properties and non residential properties in Girvan. Objective ID: 12032.	The Ayrshire Shoreline Management Plan will be carried out in partnership with NAC, SAC, SEPA and SNH which will assess the potential engineering actions in detail. This plan will also include consideration of natural flood management actions. A fluvial flood protection study should also be carried out to further investigate the following actions in detail, separately and in combination: construction of storage in Victory Park; modification of conveyance on the Mill Burn, including assessing the impact of the Scottish Water pipes in the Mill Burn; and tidal interaction with the Mill Burn and installation of a flap valve. This study may also consider natural flood management, property level protection actions and other complimentary actions.	£30,000 - £70,000	There are 99 residential and 15 non-residential properties at risk in a 200 year fluvial event within the benefitting area of these actions with a PVD of £4,708,983. This action may also benefit two electricity substations which are not included in this PVD figure.	£4,708,983	5	75 of 168	6 of 12	1 of 3	-	-	C1
Argyll & Bute Tarbert PVA (01/39)	Reduce risk in Tarbert from coastal flooding Objective ID: 103901.	A study is recommended to further investigate the feasibility of a flood protection scheme for coastal flooding in Tarbert, focusing on direct defences, revetments (coastal management action),and consideration of property level protection for residual risk. Other actions may also be considered to develop the most sustainable range of options. The study should look to confirm the length and size of defences needed, and the business case for flood protection works. The flood mapping for Tarbert should be refined as part of the study as it is currently thought to underestimate the flood risk.	£25,000 to £50,000	Flood protection works could reduce the impact of the flooding of 12 residential and 23 non-residential properties which are currently at medium likelihood of flooding. Benefits of £4,662,663 could potentially be achieved over 100 year design life of a flood scheme.	£4,662,663	5	75 of 168	6 of 22	2 of 9	2	Agree with ranking	C1
Renfrewshire Lochiwinnoch PVA (11/12)	Reduce the risk of river flooding to residential properties, non residential properties and transport (roads) in Lochwinnoch. Objective ID: 11052.	A flood protection study should be carried out to further investigate the potential to construct direct defences along the River Calder within Lochwinnoch. This study may also consider the property level protection action.	£30,000 - £70,000	There are 63 residential and 21 non-residential properties at risk in a 200 year river event, with a PVD of £4,511,364. This action may also protect 410m of the A760 and an electricity substation; however these have not been included in the PVD figure	£4,511,364	5	75 of 168	17 of 32	4 of 6	-	Current resource constraints mean that it would not be possible to complete this study within cycle 1.	C1

Location	Objective	Next Step	Estimated Study Cost	Economic Benefits	PVD Damages	Mon-Monetised Score	Ranking (evidence based)			Ranking (local preference)	Reason	Proposed delivery cycle
Fife Glenrothes PVA (10/04)	Reduce risk to people in Glenrothes from river flooding. Objective ID: 10012.	ICS is scheduled to start 2017 and may identify a need for a further study. Such Flood Protection Study should assess Conveyance and Sediment Management. The assessment should also consider these actions in combination and the impacts on flood risk upstream and downstream of each action. FIFE COUNCIL TO CONSIDER WHETHER TO RULE OUT	£30k to £50k	As this flood mechanism has not been modelled values for the indicators and benefits cannot be defined.	£5,145,008	4	79 of 168	14 of 27	11 of 16	-	-	C1
Outer Hebrides Stornoway PVA (02/02)	Reduce risk to Stornoway from coastal flooding Reduce disruption to roads in the Braigh area from coastal flooding Objective ID: 200201, 200202.	A study is needed to confirm the business case and determine the extent and size of defences required. The study should focus on options of constructing new or improving existing direct defences around the harbour area (in particular Cromwell Street) and along the northern edge of Stornoway, improvements to the existing flapvalve on the outfall of the unnamed watercourse through the Goat Hill area (coastal management action), consideration of property level protection for any residual flood risk and improving the existing flood defence walls (direct defences) either side of the A866 on the isthmus between Stornoway and the Eye peninsula (the Braighe area). Any other actions may also be considered to develop the most sustainable range of options. Wave overtopping should be considered as part of the study.	£25,000 to £50,000	The solution could reduce the impact of flooding to 13 residential and 55 non-residential properties which are currently at medium likelihood of flooding. Benefits of £4,184,102 could be achieved over 100 year design life of a flood scheme. Protection could also be improved to the Braigh from wave overtopping to reduce the frequent disruption to the only road link to the Eye peninsula.	£4,894,656	4	79 of 168	2 of 5	2 of 5	2	Agree that technical ranking is a fair representation of flood risk in the Outer Hebrides	C1
Orkney ***Whitehall PVA (03/02)***	***Reduce risk in Whitehall from coastal flooding Objective ID: 300201.***	***A flood protection study is recommended to consider flood protection works for Whitehall. The study should primarily focus on coastal management actions, direct defences and property level protection, but other actions may also be considered in order to develop the most sustainable range of options. The investigation will assess the impact from wave overtopping to confirm the existing risk and define the height and extent of flood protection works required.***	***£25,000 - £50,000***	***Flood protection works could reduce risk to 26 residential properties and 7 non-residential properties at risk during medium likelihood floods. Present value benefits of £4,862,726 could be achieved over the 100 year design life of a scheme.***	***£4,800,000***	***4***	***79 of 168***	***1 of 6***	***1 of 6***	***3***	***No detailed work here, there is some observed flooding from wave overtopping.***	***C1***
East Renfrewshire Giffnock PVA (11/13)	Reduce the risk of river / surface water flooding to residential properties in Giffnock. Objective ID: 11012.	A diversion at Thornliebank is being carried out by Scottish Water which may alleviate flooding in the area. A study should be carried out to investigate if there is any remaining flood risk following these works. If the flood risk remains a flood protection study should be carried out to further investigate the construction of direct flood defences, and the creation of an offline storage area adjacent to the Woodfarm Playing Fields. This study may also consider the PLP action.	£20,000 - £100,000	There are 47 residential and 5 non-residential properties at risk in a 200 year river event, with a PVD of £4,613,286. This action may also protect an electricity substation; however this has not been included in the PVD figure.	£4,613,286	4	79 of 168	18 of 32	2 of 2	2	Cycle 2 so that benefit from the final Scottish water work can be assessed.	C2
East Lothian Tranent PVA (10/23)	Reduce risk to people in Tranent from river flooding. Objective ID: 10081.	A Flood Protection Study should assess Modification of Conveyance, Installation / modification of fluvial control structures, Direct flood Defences and Sediment Management. The assessment should also consider these actions in combination and the impacts on flood risk upstream and downstream of each action.	£30k to £100k	29 residential properties and 46 non-residential properties at risk in a 200 year event with a PVD (damages avoided) of £4.6M	£4,600,000	4	79 of 168	14 of 27	2 of 3	2	-	C1
Fife Kemback, Pitscottie PVA (07/18)	Reduce economic damages to residential and non-residential properties caused by river flooding. Objective ID: 7050.	A Flood Protection Study for Kemback should assess Direct flood Defences, Sediment Management and Property Relocation. The assessment should also consider these actions in combination and the impacts on flood risk upstream and downstream of each action.	£30k to £100k	45 residential properties and 18 non-residential properties at risk in a 200 year event with a PVD (damages avoided) of £5.0M	£4,983,727	2	84 of 168	9 of 11	12 of 16	-	-	C1

Location	Objective	Next Step	Estimated Study Cost	Economic Benefits	PVD Damages	Mon-Monetised Score	Ranking (evidence based)			Ranking (local preference)	Reason	Proposed delivery cycle
North Ayrshire Largs PVA (12/01)	Reduce the risk of river flooding to residential properties in the north east of Largs. Objective ID: 12001.	A flood protection study should be carried out to further investigate in detail modification of conveyance by upgrading culverts in the Brisbane Glen Road area. This study may also include consideration of natural flood management, property level protection and other complimentary actions.	£20,000 - £50,000	Regional pluvial data information was used as a substitute modelling for the minor watercourse flooding. 28 residential properties are at risk in a 200 year event, with an AAD of £42,515. From historic records five properties are known to be at risk in a 1 in 5 year event.	£4,501,882	2	84 of 168	7 of 12	4 of 5	-	-	C1
Aberdeenshire Stonehaven coastal frontage PVA (06/23)	***Reduce risk in Stonehaven from coastal flooding Objective ID: 602302.***	***A flood protection study is recommended to consider flood protection works to reduce the likelihood of coastal flooding in Stonehaven. The flood protection study should consider wave attenuation actions, coastal management actions, the construction of direct defences, relocation of properties and property level protection to reduce the risk of flooding. Other actions may also be considered to develop the most sustainable range of options. The number of properties at risk does not include the impact of wave overtopping which should be considered in the study.***	***£100,000 - £250,000***	***Flood protection works could potentially reduce risk to 47 residential properties and 7 non-residential properties which are estimated to be at risk from coastal flooding during medium likelihood floods. Based on the properties identified to be at risk, £4 million of benefits over 100 years could be achieved through reducing flooding from medium likelihood floods.***	***£4,000,000***	***7***	***86 of 168***	***7 of 16***	***4 of 12***	***3***	***Recent history of severe flood damage due to wave overtopping***	***C1***
Highland Nairn PVA (05/08)	Reduce economic damages and flood risk to Nairn from the River Nairn and Auldearn Burn Objective ID: 500801.	A flood protection study is recommended. The study should include investigation of modification of conveyance actions on the Auldearn Burn, river and floodplain restoration, sediment management and direct defences to reduce risk from both rivers; the River Nairn and Auldearn Burn. Other actions should also be considered to get the most sustainable options for flood risk management.	£ 50,000 - £100,000	A scheme could reduce risk to 57 residential properties and 9 non-residential properties at medium likelihood of flooding. Present value benefits of £3,858,934 could be achieved over the 100 year design life of a flood scheme. The study should be carried out alongside the natural flood management study; which may provide additional benefits that cannot be quantified at this stage. A combined study for Central and East Nairn could achieve combined present value benefits of up to £11,544,369 over the 100 year design life of flood protection works for Nairn as a whole.	£3,800,000	7	86 of 168	3 of 6	6 of 23	6	Regular flooding occurs at Balmakeith estate - a culvert replacement is scheduled.	C1
South Lanarkshire Upper River Clyde (upstream of Strathclyde Park) PVA (11/17/2)	Reduce the risk of the River Clyde / surface water flooding to residential properties, non residential properties and transport along the River Clyde (upstream of Strathclyde Park). Objective ID: 11068.	A flood protection study should be carried out to further investigate the following actions in detail, separately and in combination: improving the conveyance of a number of existing structures on the upper River Clyde; and the construction of flood defences at various locations along the upper River Clyde (upstream of Strathclyde Park). SUDs should be assessed in any future flood study undertaken in the area. This study may also consider the PLP action.	£50,000 - £100,000	There are 42 residential and 11 non-residential properties at risk in a 200 year river event, with a PVD of £4,437,383. This action may also protect 700m of the A72; however this has not been included in the PVD figure.	£4,437,383	6	88 of 168	19 of 32	3 of 4	-	-	C1
Highland Inverness PVA (01/21)	***Reduce flood risk in Inverness from the River Ness between Ness Bridge and Ness Islands Objective ID: 102106.***	***The Upper Ness scheme has previously been developed to Planning and Flood Prevention Order stage, but not progressed to construction due to public objections and a weak business case. It is recommended that the previously proposed scheme is reviewed to refine the works and strengthen the business case. Other actions may also be considered to develop the most sustainable range of options.***	***<£25,000***	***The business case for flood protection works will need to be developed further as part of the study to fully justify the scheme. Flood protection works could reduce the impact of the flooding of 113 residential and 49 non-residential properties which are currently at medium likelihood of flooding. Benefits of £3,939,660 could potentially be achieved over 100 year design life of a flood scheme.***	***£3,939,660***	***6***	***88 of 168***	***7 of 22***	***6 of 23***	***8***	***This scheme has a flood protection order, but was dropped as not cost beneficial. Study to investigate alternative solution.***	***C1***

Location	Objective	Next Step	Estimated Study Cost	Economic Benefits	PVD Damages	Mon-Monetised Score	Ranking (evidence based)			Ranking (local preference)	Reason	Proposed delivery cycle
West Lothian ***Linlithgow PVA (10/13)***	***Reduce economic damages to residential and non-residential properties in Linlithgow caused by flooding from the River Avon and Bell's Burn. Objective ID: 10047.***	***A Flood Protection Study should assess the following: Modification of Conveyance, Direct flood Defences and Sediment Management. The assessment should also consider these actions in combination and the impacts on flood risk upstream and downstream of each action.***	***£30k to £100k***	***56 residential properties and 13 non-residential properties at risk in a 200 year event with a PVD (damages avoided) of £4.1M***	***£4,100,000***	***5***	***90 of 168***	***16 of 27***	***2 of 4***	***3***	***-***	***C1***
Highland ***Fort William PVA (01/25)***	***Reduce flood risk in Fort William from the River Nevis*** ***Reduce flood risk in Fort William from Loch Linnhe Objective ID: 102501, 102502.***	***A study is recommended focussing on direct defences, revetments and property level protection, but other actions may also be considered in order to develop the most sustainable range of options. The tidal impact in the River Nevis should be considered.***	***£25,000 to £50,000***	***Flood protection works could reduce the impact of the flooding of 64 residential and 37 non-residential properties which are currently at medium likelihood of flooding. Benefits of £4,057,886 could potentially be achieved over 100 year design life of a flood scheme.***	***£4,057,886***	***5***	***90 of 168***	***8 of 22***	***8 of 23***	***9***	***Generally agree with ranking***	***C1***
Fife Culross PVA (10/08)	Reduce economic damages to residential and non-residential properties and risk to people in Culross caused by coastal flooding. Objective ID: 10026.	A Flood Protection Study should assess Direct flood Defences, Sediment Management and Natural Flood Management. Natural Flood Management should include Wave Attenuation and Surge Attenuation. The assessment should also consider these actions in combination and the impacts on flood risk upstream and downstream of each action.	£30k to £120k	83 residential properties and 13 non-residential properties at risk in a 200 year event with a PVD (damages avoided) of £4.0M	£4,000,000	5	90 of 168	16 of 27	13 of 16	-	-	C1
Aberdeenshire ***Ballater PVA (06/22)***	***Reduce flood risk in Ballater from the River Dee Objective ID: 602201.***	***A flood protection study is recommended to consider flood protection works to reduce the likelihood of flooding in Ballater from the River Dee. The flood protection study should primarily focus on direct defences, relocation of properties and property level protection, but other actions may also be considered in order to develop the most sustainable range of options.***	***£50,000 - £100,000***	***Flood protection works could potentially reduce risk to 192 residential and 32 non-residential properties which are estimated to be at risk from the River Dee during medium likelihood floods. Based on the properties identified to be at risk, £3,832,032 of benefits over 100 years could be achieved through reducing flooding from medium likelihood events. There are no properties at risk from high likelihood events and the impacts of climate change will have a significant impact on increasing the risk in Ballater.***	***£3,832,032***	***5***	***90 of 168***	***8 of 16***	***5 of 12***	***6***	***The LA thinks the damages are quite low, as mostly at risk from low likelihood floods. However, the caravan parks floods regularly at high return periods. The LA believe Fettercairn should be higher on list than Ballater.*** ***Study assigned to C2 following review after NPWG2***	***C2***
North Ayrshire Largs PVA (12/03)	Reduce the risk of river / coastal flooding to residential properties in Largs. Objective ID: 12004.	A flood protection study should be carried out to further investigate in detail the fluvial and coastal flood risk in Largs. This should include updating the existing modelling on the Gogo Water, and further investigation into enhancing and extending the existing coastal defences. The Ayrshire Shoreline Management Plan will cover Largs and may include this coastal action.	£30,000 - £50,000	There are 201 residential and 72 non-residential properties at risk in a 200 year fluvial event within the benefitting area of this action with a PVD of £3,696,082. This action may also benefit five electricity substations and 300m of primary road which are not included in this PVD figure.	£3,696,082	5	90 of 168	8 of 12	5 of 5	-	-	C1
West Dunbartonshire Duntocher Burn PVA (11/05)	Reduce the risk of river / surface water flooding to residential properties, non residential properties and community facilities from the Duntocher Burn. Objective ID: 11079.	A flood protection study should be carried out to further investigate upgrading a culvert that carries the Duntocher Burn under the canal. SUDs should be assessed in any future flood study undertaken in the area.	£20,000 - £30,000	There are 3 residential and 10 non-residential properties at risk in a 200 year fluvial event within the benefitting area of this action with a PVD of £3,598,710. This action may also benefit an electricity substation and a telephone exchange which are not included in this PVD figure.	£3,598,710	5	90 of 168	20 of 32	2 of 2	-	-	C1

Flood Risk Management (Scotland) Act

FRM Strategies – Prioritisation of Actions

Flood Protection Studies_v4.0_DRAFT | Version Date:10/08/2015 | NPWG Meeting 3 (Paper 6)

Location	Objective	Next Step	Estimated Study Cost	Economic Benefits	PVD Damages	Mon-Monetised Score	Ranking (evidence based)			Ranking (local preference)	Reason	Proposed delivery cycle
South Ayrshire Troon PVA (12/07)	Reduce the risk of coastal / surface water flooding to non residential properties in Troon. Objective ID: 12020.	The Ayrshire Shoreline Management Plan should further investigate the following actions in detail, separately and in combination in Troon: coastal management by revetments; and construction of direct defences by enhancing seawalls.	To be provided by the Local Authority.	There are 420 residential and 358 non-residential properties at risk in a 200 year coastal event within the benefitting area of the storage action with a PVD of £4,054,753. This action may also benefit four electricity substations and 430m of A roads which are not included in this PVD figure.	£4,054,753	4	96 of 168	9 of 12	2 of 3	-	-	C1
Dumfries and Galloway ***Creetown PVA (14/17)***	***Reduce the risk of river / coastal flooding to residential properties in Creetown. Objective ID: 14023.***	***A flood protection study should be carried out to investigate further the construction of direct flood defences on the Moneypool and Balloch Burns in Creetown. This study should take account of the interaction of the Moneypool and Balloch Burns with the tidal River Cree. The study may consider Natural Flood Management and Property Level Protection***	***£20-30K***	***There are 82 residential properties and 15 non-residential properties at risk in a 200 year river event with a PVD of £3,497,840***	***£3,497,840***	***4***	***96 of 168***	***8 of 11***	***8 of 10***	***5***	-	***C1***
Outer Hebrides South Uist - Bornish to Boisdale PVA (02/08)	Reduce risk to southern South Uist from river and coastal flooding Objective ID: 200801.	Further investigations into the operation of the existing sluice gates is recommened to determine their impact on flood risk and the feasibility of improving their operation for this purpose (installation/modification of river control structures action). A dune management plan is to be developed for the machair and sand dunes on the west coast of South Uist to cover wave attenuation and considering the long term stability of the coastaline and flood risk management. Other actions may also be considered to develop the most sustainable range of options.	<£25,000	The business case for improvements to the existing sluice gates would need to be developed as part of the study. This would include confirming the number of properties which may benefit and any traffic disruption which could be avoided through improvements to existing structures. Potentially up to 18 residential and 5 non-residential properties may have some benefits from future flood protection works.	£3,858,756	3	98 of 168	3 of 5	3 of 5	3	Agree that technical ranking is a fair representation of flood risk in the Outer Hebrides	C1
Scottish Borders ***Newcastleton PVA (14/03)***	***Reduce risk to residential properties from river flooding within Newcastleton. Objective ID: 14003.***	***A flood protection study should be carried out to investigate further the construction of direct flood defences on the Liddel Water in Newcastleton. The study should consider Natural Flood Management and Property Level Protection.***	***£20-30K***	***There are 128 residential properties and 5 non-residential properties at risk in a 200 year river event, with a PVD of £3,569,289***	***£3,569,289***	***3***	***98 of 168***	***9 of 11***	***5 of 6***	***4***	***-***	***C1***
North Lanarkshire Cumbernauld PVA (11/04)	Reduce the risk of the Luggie Water flooding to residential properties in Cumbernauld. Objective ID: 11035.	A flood protection study should be carried out to further investigate the following actions in detail, separately and in combination: the potential to redesign the Badenheath Bridge to increase conveyance of the Luggie Burn; and the construction of direct defences along the Luggie Burn to reduce the risk of flooding to Cumbernauld. This study should also consider the potential role of Property Level Protection.	£30,000 - £50,000	There are 56 residential properties at risk in a 200 year event, with a PVD of £4,423,102.	£4,423,102	2	100 of 168	21 of 32	1 of 4	-	-	C1
North Lanarkshire Holytown PVA (11/17/2)	Reduce the risk of flooding to residential properties in Holytown. Objective ID: 11038.	A pluvial study of Holytown is to be carried out by the council to further assess the flow paths and potential flood risk in the area.	£20-30K	There are 77 residential and 22 non residential properties at risk in a 200 year pluvial event.	£3,668,370	1	101 of 168	22 of 32	2 of 4	-	-	C1
Aberdeenshire ***Fettercairn PVA (07/02)***	***Reduce economic damages to residential and non-residential properties in Fettercairn caused by river flooding. Objective ID: 7003.***	***Investigative studies were carried out about Aberdeenshire Council looking at a range of options to reduce flood risk; further work is needed to identify preferred options. The study should be carried out in conjunction with the Natural Flood Management study assessing the following: Runoff Control and sediment management. The assessment should also consider these actions in combination and the impacts on flood risk upstream and downstream of each action. Improved flood mapping from the study including representation of existing flood protection measures to be shared with SEPA.***	***£10k to £70k***	***39 residential properties and 10 non-residential properties at risk in a 200 year event with a PVD (damages avoided) of £2.6M. 30 residential properties and 4 non residential properties are at risk for a high likelihood event and could benefit from NFM actions.***	***£2,600,000***	***7***	***102 of 168***	***10 of 11***	***6 of 12***	***5***	***LA believes Fettercairn should be higher on the list than Ballater. Politically higher priority than Tarland or Ballater.*** ***Study assigned to C2 following review after NPWG2***	***C2***

Location	Objective	Next Step	Estimated Study Cost	Economic Benefits	PVD Damages	Mon-Monetised Score	Ranking (evidence based)			Ranking (local preference)	Reason	Proposed delivery cycle
Argyll & Bute ***Dunoon PVA (11/07)***	***Reduce the risk of Milton Burn flooding to residential properties in Dunoon. Objective ID: 11006.***	***There is potential to extend the Milton Burn Flood Prevention Scheme to achieve a standard of protection of 1 in 100 year event plus climate change for a greater area of Dunoon, and this should be investigated further by a flood protection study.*** ***SUDs should be assessed in any future flood study undertaken in the area. This study may also consider the NFM and PLP actions.***	***£30,000 - £50,000***	***There are 31 residential and 3 non-residential properties at risk in a 200 year event, with a PVD of £3,278,162. This action may also protect an electricity substation but this has not been included in the PVD figure.***	***£3,278,162***	***6***	***103 of 168***	***23 of 32***	***3 of 9***	***5***	***Local Knowledge and Flood History***	***C2***
Aberdeenshire ***Aboyne PVA (06/20)***	***Reduce flood risk in Aboyne from Tarland Burn and River Dee Objective ID: 602002.***	***A flood study should be carried out to address flooding from the Tarland Burn and River Dee in Aboyne. To reduce flood risk from the Tarland Burn it is recommended previous work carried out by Aberdeenshire Council is developed further. The flood protection study should primarily focus on direct defencs, relocation of properties, runoff reduction, river or floodplain restoration, sediment management and property level protection. Other actions may also be considered to develop the most sustainable range of options.***	***£50,000 - £100,000***	***Flood protection works could reduce risk to 101 properties at risk from Tarland Burn during medium likelihood floods. Present value benefits of £2,284,000 could be achieved over the 100 year design life of a flood scheme. Flood protection works could reduce risk to 31 residential properties and 9 non-residential properties which are estimated to be at risk from the River Dee during medium likelihood floods. Present value benefits of £1,020,873 could be achieved over the 100 year design life of the flood scheme for the River Dee in Aboyne.***	***£3,304,873***	***5***	***104 of 168***	***9 of 16***	***7 of 12***	***9***	***Local understanding of flood risk and flood history***	***C2***
Highland ***Golspie PVA (01/06)***	***Reduce risk in Golspie from coastal flooding Objective ID: 100601.***	***The study should primarily focus on coastal management (revetments), direct defences (flood walls), wave attenuation through beach recharge (natural flood management) and consideration of property level protection for any residual risk, but other actions may also be considered in order to develop the most sustainable range of options. The study should look to confirm the extent and size of defences required and the business case for flood protection works. This study should be carried out alongside the natural flood management study to ensure a coordinated response to the flood risk is developed.***	***£25,000 to £50,000 (for combined flood protection and natural flood management study)***	***Flood protection works could reduce the impact of flooding to 18 residential and 3 non-residential properties which are currently at medium likelihood of flooding. Present value benefits of £3,288,281 could be achieved over the 100 year design life of a flood scheme. The study should be carried out alongside the natural flood management study; which may provide additional benefits that cannot be quantified at this stage.***	***£3,288,281***	***5***	***104 of 168***	***9 of 22***	***9 of 23***	***7***	***Recent history of flooding***	***C1***
Fife Tayport PVA (07/14)	Reduce economic damages to residential and non residential properties in Tayport caused by coastal flooding. Objective ID: 7038.	A Flood Protection Study is in progress (due for completion in May 2015) assessing Direct flood Defences. This study should also include Natural Flood Management (Wave Attenuation). The assessment should also consider these actions in combination and the impacts on flood risk upstream and downstream of each action.	£30k to £120k	17 residential properties and 1 non-residential property at risk in a 200 year event with a PVD (do nothing) of £2.83M	£2,830,000	5	104 of 168	11 of 11	14 of 16	-	-	C1
Highland ***Ballachulish PVA (01/28)***	***Reduce flood risk in Ballachulish from River Laroch Objective ID: 102801.***	***A study is recommended to further investigate the feasibility of a flood protection scheme for Ballachulish, focusing on direct defences and channel modifications between Laroch Beag and Albert Road, and consideration of property level protection. Sediment management in the River Laroch to reduce bank erosion and any other actions may also be considered in order to develop the most sustainable range of options. The study should look to confirm the length and size of works needed and the business case for flood protection works.***	***£25,000 to £50,000***	***The business case for flood protection works will need to be developed further as part of the study to fully justify the scheme. Flood protection works could reduce the impact of the flooding of 17 residential and 5 non-residential properties which are currently at medium likelihood of flooding. Benefits of £2,761,092 could potentially be achieved over 100 year design life of a flood scheme.***	***£2,761,092***	***5***	***104 of 168***	***9 of 22***	***9 of 23***	***14***	***The LA has no information on historical flooding. Thus low priority at this stage.***	***C2***

Location	Objective	Next Step	Estimated Study Cost	Economic Benefits	PVD Damages	Mon-Monetised Score	Ranking (evidence based)			Ranking (local preference)	Reason	Proposed delivery cycle
City of Edinburgh Edinburgh: Water of Leith PVA (10/17)	Reduce economic damages to residential and non-residential properties in Port of Leith / Granton area caused by coastal flooding. Objective ID: 10095.	To undertake a study of the siltation in the Water of Leith basin in conjunction with the operation of the docks.	45000	12 residential properties and 6 non-residential properties at risk in a 200 year event with a PVD (damages avoided) of £2.8M	£2,758,102	5	104 of 168	18 of 27	2 of 3	1	-	C1
Fife Cowdenbeath PVA (10/28c)	Reduce economic damages to residential and non residential properties from river flooding in Cowdenbeath. Objective ID: 10098.	A Flood Protection Study should assess Flood Storage, Modification of Conveyance and Sediment Management. The assessment should also consider these actions in combination and the impacts on flood risk upstream and downstream of each action.	£30k to £100k	42 residential properties and 5 non-residential properties at risk in a 200 year event with a PVD (damages avoided) of £2.5M	£2,500,000	5	104 of 168	18 of 27	14 of 16	-	-	C1
East Lothian ***Dunbar, West Barns, North Berwick PVA (10/25)***	***Reduce economic damages to residential and non-residential properties caused by river and coastal flooding. Objective ID: 10083.***	***A Flood Protection Study in Dunbar/ West Barnes should assess Modification of Conveyance, Direct flood Defences and Sediment Management. Natural Flood Management should assess Wave Attenuation. The assessment should also consider these actions in combination and the impacts on flood risk upstream and downstream of each action. The study should also assess the risk and mitigation of wave overtopping at North Berwick.***	***£30k to £120k***	***49 residential properties and 15 non-residential properties at risk in a 200 year event with a PVD (damages avoided) of £3.4M***	***£3,384,500***	***4***	***110 of 168***	***20 of 27***	***3 of 3***	***1***	***Wave overtopping risk at North Berwick has not been studied. The risk may qualify North Berwick for PVA designation.***	***C1***
Falkirk ***Falkirk Westquarter PVA (10/11)***	***Reduce economic damages to residential and non-residential properties in Falkirk West Quarter caused by flooding from the Westquarter Burn. Objective ID: 10037.***	***Vegetation management and maintenance should be continued to control erosion. A future Flood Protection Study, if required, should assess Direct flood Defences and Sediment Management.***	***£30k to £100k***	***67 residential properties and 1 non-residential properties at risk in a 200 year event with a PVD (damages avoided) of £3.3M***	***£3,300,000***	***4***	***110 of 168***	***20 of 27***	***4 of 5***	***5***	***Ongoing management is reducing flood risk. Study to be considered in future planning cycles.***	***C1/C2***
Orkney St. Margaret's Hope PVA (03/07)	Reduce flood risk in St Margaret's Hope from coastal flooding and the access road to Hope school Objective ID: 300701.	A flood protection study is recommended to consider flood protection works for St. Margaret's Hope. The study should primarily focus on coastal management actions, direct defences and property level protection, but other actions may also be considered in order to develop the most sustainable range of options. The investigation will assess the impact from wave overtopping to confirm the existing risk and define the height and extent of flood protection works required.	£25,000 - £50,000	Flood protection works could reduce risk to 50 residential properties and 10 non-residential properties during medium likelihood floods, however these numbers are estimated and will be refined within the study. Present value benefits of potentially £2,921,380 could be achieved over the 100 year design life of a scheme. These benefits should be refined during the study The costs and benefits for flood protection works would be dependent whether the road was protected or solely properties.	£2,900,000	4	110 of 168	2 of 6	2 of 6	2	The council regularly needs to put up temporary barriers at high tides to prevent flooding. Generally the 1st location to be affected by coastal flooding.	C1
Orkney ***Pierowall PVA (03/08)***	***Reduce risk in Pierowall from coastal flooding Objective ID: 300801.***	***A flood protection study is recommended to consider flood protection works for Pierowall. The study should primarily focus on coastal management actions, direct defences and property level protection, but other actions may also be considered in order to develop the most sustainable range of options. The investigation will assess the impact from wave overtopping to confirm the existing risk and define the height and extent of flood protection works.***	***£25,000 - £50,000***	***Flood protection works could reduce risk to 40 residential properties and 20 non-residential properties at risk during medium likelihood floods, however these numbers are estimated and will be refined within the study. Present value benefits of potentially £1,482,204 could be achieved over the 100 year design life of a scheme. These benefits would be refined within the study. The costs and benefits for flood protection works would be dependent whether the road was protected or solely properties.***	***£2,900,000***	***4***	***110 of 168***	***2 of 6***	***2 of 6***	***5***	***In 2005 Pierowall experienced a 1 in 22 year event.***	***C1***

Location	Objective	Next Step	Estimated Study Cost	Economic Benefits	PVD Damages	Mon-Monetised Score	Ranking (evidence based)			Ranking (local preference)	Reason	Proposed delivery cycle
East Ayrshire Dalmellington PVA (12/19c)	***Reduce the risk of the Muck Water flooding to residential properties in Dalmellington Objective ID: 12033.***	***A flood protection study should be carried out to further investigate the construction of river walls along the Muck Water.***	***£30,000 - £50,000***	***There are 14 residential and no non-residential properties at risk in a 200 year fluvial event within the benefitting area of these actions with a PVD of £2,750,720.***	***£2,750,720***	***4***	***110 of 168***	***10 of 12***	***3 of 4***	***4***	-	***C1***
Renfrewshire Hawkhead Burn, Paisley PVA (11/13)	Reduce the risk of Hawkhead Burn / surface water flooding to residential properties and non residential properties in Paisley. Objective ID: 11058.	A flood protection study should be carried out to further investigate the following actions in detail, separately and in combination: formalising storage upstream of the former railway line and school; improving the conveyance of the Hawkhead Burn; and construction of direct defences along the Hawkhead Burn through Paisley. SUDs and property level protection should be assessed in any future flood study undertaken in the area. These actions may be incorporated into the Paisley SWMP.	£30,000 - £50,000	There are 25 residential and 1 non-residential properties at risk in a 200 year fluvial event within the benefitting area of this action with a PVD of £2,660,576. There is 1 non-residential property at risk in a 200 year surface water event, with a PVD of £32,899.	£2,693,475	4	110 of 168	24 of 32	5 of 6	-	Current resource constraints mean that it would not be possible to complete this study within cycle 1.	C2
Scottish Borders Bonchester Bridge PVA (13/13)	***Reduce economic damages to residential and non-residential properties and flood risk to community facilities caused by river flooding. Objective ID: 13032.***	***A Flood Protection Study should assess Direct flood Defences and Sediment Management. The assessment should also consider these actions in combination and the impacts on flood risk upstream and downstream of each action.***	***£30k to £100k***	***38 residential properties and 7 non-residential properties at risk in a 200 year event with a PVD (damages avoided) of £3.0M***	***£3,000,000***	***3***	***116 of 168***	***4 of 5***	***6 of 6***	***5***	***Not a high priority compared to risk in other areas***	***C2***
Perth & Kinross Perth PVA (08/13)	Reduce economic damages to residential and non-residential properties and risk to people in Perth caused by flooding from the Perth Town Lade and the Craigie Burn. Objective ID: 8029.	A Flood Protection Study should consider flood risk from the Craigie Burn. The study should assess the following for the Craigie Burn: Direct flood Defences and Sediment Management. The assessment should also consider these actions in combination and the impacts on flood risk upstream and downstream of each action.	£50k to £100k	58 residential properties and 4 non-residential properties at risk in a 200 year event with a PVD (damages avoided) of £2.8M	£2,800,000	3	116 of 168	6 of 7	6 of 6	-	-	C1
Stirling Gargunnock PVA (09/06)	Reduce economic damages to residential and non-residential properties in Gargunnock caused by flooding from the Gargunnock Burn. Objective ID: 9018.	A flood protection study to assess the level of flood risk in Gargunnock. No flooding issues previously identified by Stirling Council and doubts over SEPA hazard maps - probably due to multiple culverts/ bridges. The watercourse should be resurveyed and the model updated in collaboration between SEPA / LA.	Unknown	49 residential properties and 1 non-residential property at risk in a 200 year event with a PVD (do nothing) of £3.5M.	£3,446,204	2	118 of 168	5 of 5	2 of 2	-	-	C1
Highland Dingwall and Blairninich PVA (01/14)	***Reduce flood risk in Dingwall from the River Peffery Reduce flood risk in Blairninich from the River Peffery Reduce risk in Dingwall from coastal flooding Objective ID: 101401, 101402, 101403.***	***The study should primarily focus on direct defences (flood walls), storage runoff control, river or floodplain restoration, sediment management and consideration of property level protection for any residual risk, but other actions may also be considered in order to develop the most sustainable range of options.***	***£25,000 to £75,000***	***Flood protection works could reduce the impact of the flooding to61 residential and 28 non-residential properties which are currently at medium likelihood of flooding. Benefits of £2,330,257 from river flooding could potentially be achieved over 100 year design life of a flood scheme.***	***£2,330,257***	***9***	***119 of 168***	***11 of 22***	***11 of 23***	***3***	***Frequent flooding and political pressure to improve the flooding situation in Dingwall. In addition opportunity to undertake improvement works in conjunction with new road construction.***	***C1***
Highland Aviemore (River Spey) PVA (05/11)	***Reduce economic damages and flood risk to Aviemore from the River Spey Objective ID: 501101.***	***A flood protection study is recommended to assess direct defences to reduce risk in Aviemore from the River Spey.***	***£ 50,000 - £100,000***	***Flood protection works could reduce risk to 8 residential properties and 5 non-residential properties at medium likelihood of flooding. Present value benefits of £1,237,175 could be achieved over the 100 year design life of a flood scheme.***	***£1,200,000***	***7***	***120 of 168***	***4 of 6***	***12 of 23***	***10***	***There is an existing study from 2---, but proposed flood scheme had negative cost/benefit.***	***C1***
Falkirk Slamannan PVA (10/13)	***Reduce risk to people in Bathgate, Blackridge, Linlithgow and Slamannan from river flooding. Objective ID: 10049. This study will focus on Slamannan. Studies in other areas area also planned.***	***A Flood Protection Study will be informed by the ongoing surface water study and ICS and should assess Sediment Management and Direct flood Defences. The study should also investigate Natural Flood Management (Runoff control and Sediment Management). The assessment should also consider these actions in combination and the impacts on flood risk upstream and downstream of each action.***	***£30k to £120k***	***18 residential properties and 1 non-residential properties at risk in a 200 year event in Slamannan with a PVD of £2.1M.***	***£2,072,633***	***6***	***121 of 168***	***22 of 27***	***5 of 5***	***2***	***Local priority due to ongoing studies and investigations***	***C1***

Location	Objective	Next Step	Estimated Study Cost	Economic Benefits	PVD Damages	Mon-Monetised Score	Ranking (evidence based)			Ranking (local preference)	Reason	Proposed delivery cycle
South Lanarkshire Biggar PVA (13/07)	Reduce economic damages to residential and nonresidential properties in Biggar caused by flooding from the Biggar Burn. Objective ID: 13021.	A Flood Protection Study should assess the following: Flood Storage, Modification of Conveyance, Direct flood Defences and Sediment Management. The study should be carried out in conjunction with the Natural Flood Management study assessing the following: River/Floodplain Restoration and Sediment Management. The assessment should also consider these actions in combination and the impacts on flood risk upstream and downstream of each action.	£30k to £120k	38 residential properties and 12 non-residential properties at risk in a 200 year event with a PVD (damages avoided) of £2.3M. 15 residential properties and 10 non residential properties are at risk for a high likelihood event and could benefit from NFM actions.	£2,300,000	5	122 of 168	5 of 5	4 of 4	-	-	C1
Aberdeenshire ***Kintore PVA (06/13)***	***Reduce flood risk in Kintore from all watercourses (River Don, Torry Burn, Tuach Burn and Loch Burn) Objective ID: 601303.***	***A hydraulic stuy should be taken forward to assess the culverted sections of watercourses and the alignment of the watercourses following the A96 works. This will allow locations of risk to be confirmed within the modelling and against historic flood locations. The improved understanding of risk will increase the understanding of flood mechanisms and focus the area of further study, confirming the risk from all four watercourses; the River Don, Torry Burn, Tuach Burn and Loch Burn. The study should then progress to identify the most sustainable actions to manage flood risk.***	***0***	***The baseline mapping identifies 25 residential and 13 non-residential properties at risk in the area during medium likelihood events. Based on this potential benefits of 2,187,547 over 100 years could be achieved. This value is likely to change during the initial stages of the study.***	***£2,187,547***	***5***	***122 of 168***	***10 of 16***	***8 of 12***	***7***	***Local understanding of flood risk and flood history***	***C2***
Highland Kinlochewe PVA (01/13)	Reduce flood risk in Kinlochewe from the A'Ghairbhe river Objective ID: 101301.	A study is recommended to further investigate the feasibility of a flood protection scheme for Kinlochewe, focusing on direct defences, the use of a control structure at Loch Clair to increase storage upstream, runoff contro, large woody debris and boulders in tributaries (river or floodplain restoraion), sediment management and consideration of property level protection for any residual risk. Other actions may also be considered to develop the most sustainable range of options. The study should look to confirm the extent and size of defences required and the business case for flood protection works.	£25,000 to £50,000	Flood protection works could reduce the impact of the flooding to 14 residential and 9 non-residential properties which are currently at medium likelihood of flooding. Benefits of £1,818,082 could potentially be achieved over 100 year design life of a flood scheme.	£1,818,082	5	122 of 168	12 of 22	13 of 23	13	Generally agree with ranking	C2
South Ayrshire Ayr PVA (12/09)	Reduce the risk of coastal / surface water flooding to residential properties and non residential properties in Ayr. Objective ID: 12024.	The Ayrshire Shoreline Management Plan is under development, this study will look to refine knowledge of coastal flood risk in the area including wave overtopping and the current coastal protection offered. In parallel a SWMP of Ayr will identify and look for options to mitigate Surface water flooding. Based on the output from these study there may be the requirement to investigate possible mitigation options for the combined sources within Ayr including investigatation the following actions in detail, separately and in combination: coastal management by revetments; and construction of direct defences by enhancing seawalls, SUDs options from the SWMP. Other complimentary actions may be considered in this next step.	To be provided by the Local Authority.	There are 112 residential and 19 non-residential properties at risk in a 200 year fluvial event within the benefitting area of these actions with a PVD of £1,575,489. This action may also benefit one electricity substation and 150m of A roads which are not included in this PVD figure.	£1,575,489	5	122 of 168	11 of 12	3 of 3	-	-	C1
Renfrewshire Kilbarchan PVA (11/12)	Reduce the risk of Kilbarchan Burn / surface water flooding to residential properties, non residential properties and transport (roads) in Kilbarchan. Objective ID: 11050.	A flood protection study should be carried out to further investigate the following actions in detail, separately and in combination: storage for the Kilbarchan Burn at Bog Park; improved conveyance of the Kilbarchan Burn through Kilbarchan by upgrading of culverts and watercourse channel; and sediment management. SUDs should be assessed in any flood study undertaken in the area. There is potential to incorporate this study into the proposed Johnstone study (objective 11049).	£30,000 - £70,000	There are 21 residential and 12 non-residential properties at risk in a 200 year river event, with a PVD of £1,340,608. This action may also protect 2 electricity substations; however this has not been included in the PVD figure. There are 17 residential and 13 non-residential properties at risk in a 200 year surface water event within the benefitting area, with a PVD of £291,194.	£1,631,802	5	122 of 168	25 of 32	6 of 6	-	This area is linked to the Johnstone study and therefore will be completed at the same time.	C1

Location	Objective	Next Step	Estimated Study Cost	Economic Benefits	PVD Damages	Mon-Monetised Score	Ranking (evidence based)			Ranking (local preference)	Reason	Proposed delivery cycle
Outer Hebrides North Uist PVA (02/05)	Reduce disruption to roads at high risk from coastal flooding Objective ID: 200501.	Further investigation into the feasibility of reducing wave overtopping at the Baleshare causeway is required (direct defences action). A dune management plan is to be developed for the machair and sand dunes on the west coast of North Uist to cover wave attenuation and considering the long term stability of the coastaline and flood risk management. Other actions may also be considered to develop the most sustainable range of options.	£25,000 to £50,000	The business case for works to the Baleshare causeway would need to be developed as part of the study, focusing on the disruption to traffic during high risk floods, which has not been quantified at this stage. The causeway is the only access between Baleshare and North Uist.	£1,961,476	4	127 of 168	4 of 5	4 of 5	4	Agree that technical ranking is a fair representation of flood risk in the Outer Hebrides	C1
Argyll & Bute ***Helensburgh PVA (11/02)***	***Reduce the risk of coastal flooding to residential properties and non residential properties in Helensburgh. Objective ID: 11003.***	***A proposed development has been put forward by the council, including rebuilding of the swimming pool and raising of a car park out of the flood extents. It is recommended that a flood protection study should be carried out to further investigate new and / or enhanced sections of defences along the seafront to protect flooding to the remainder of Helensburgh.***	***£30,000 - £70,000***	***There are 26 residential and 13 non-residential properties at risk in a 200 year coastal event, with a PVD of £1,171,843. This action may also offer protection to 530m of the A814; however this has not been included in the PVD figure.***	***£1,171,843***	***4***	***127 of 168***	***26 of 32***	***4 of 9***	***3***	***Local Knowledge and Flood History***	***C1***
Angus Kirriemuir PVA (08/05)	Reduce economic damages to residential and non-residential properties caused by river flooding. Objective ID: 8010.	A Flood Protection / NFM Study in Kirriemuir should assess Flood Storage, Sediment Management, Modification of Conveyance, Direct flood Defences and Property Relocation. Natural Flood Management should assess Floodplain Restoration and Sediment Management. The assessment should also consider these actions in combination and the impacts on flood risk upstream and downstream of each action.	£50k to £150k	15 residential properties and no non-residential properties at risk in a 200 year event with a PVD (damages avoided) of £1.2M.	£1,165,406	4	127 of 168	7 of 7	6 of 6	5	-	C1
Highland ***Glencoe PVA (01/28)***	***Reduce flood risk in Glencoe from Loch Leven Objective ID: 102802.***	***A study is recommended to further investigate the feasibility of a flood protection scheme for Glencoe. The focus should be on direct defences, revetments (coastal management actions), and consideration of property level protection for residual risk. Other actions may also be considered to develop the most sustainable range of options. The study should look to confirm the length and size of defences needed, and the business case for flood protection works.***	***£25,000 to £50,000***	***The business case for flood protection works will need to be developed further as part of the study to fully justify the scheme. Flood protection works could reduce the impact of the flooding of 20 residential and 5 non-residential properties which are currently at medium likelihood of flooding. Benefits of £1,151,888 could potentially be achieved over 100 year design life of a flood scheme.***	***£1,151,888***	***4***	***127 of 168***	***13 of 22***	***14 of 23***	***15***	***Generally agree with ranking***	***C2***
Aberdeen City Fittie (Footdee) PVA (06/18)	Reduce risk from coastal flooding in the Aberdeen harbour area Objective ID: 601802.	The current SEPA national coastal modelling does not identify properties to be at flood risk, however there is a history of flooding. Thus a hydraulic study should be undertaken and the risk from wave overtopping should be considered. Once the properties are at risk of flooding isare identified, the most sustainable combination of actions to manage risk should be identified.	£25,000 - £50,000	Based on the current estimated number of properties at risk potential benefits of £1.6 million could be achieved over the 100 year design life of a scheme. The study should confirm the true number of properties at risk of coastal flooding and the potential benefits.	£1,665,235	3	131 of 168	11 of 16	4 of 4	-	-	C1
Highland ***Lochinver Primary School and nursery PVA (01/05)***	***Reduce the number of community facilities at risk of flooding from Loch Culag in Lochinver. Objective ID: 100501.***	***A study is recommended for Lochinver Primary School and nursery to reduce the likelihood of flooding from Loch Culag. The study should primarily focus on direct defences around the perimeter of the school grounds, but other actions may also be considered in order to develop the most sustainable range of options. The study should look to confirm the size of defence required and the business case for flood protection works.***	***<£25,000***	***Present value benefits of £1,806,486 could be achieved over the 100 year design life of a flood scheme for Lochinver Primary School and nursery.***	***£1,806,486***	***2***	***132 of 168***	***14 of 22***	***15 of 23***	***16***	***Generally agree with ranking***	***C2***

Location	Objective	Next Step	Estimated Study Cost	Economic Benefits	PVD Damages	Mon-Monetised Score	Ranking (evidence based)			Ranking (local preference)	Reason	Proposed delivery cycle
North Lanarkshire Kilsyth PVA (11/04)	Reduce the risk of river flooding to residential properties and non residential properties in Kilsyth. Objective ID: 11036.	A flood protection study should be carried out to further investigate the following actions in detail, separately and in combination: use of the Scottish Canals feeder as a bypass channel to divert some flow from the Colzium Burn to Banton Loch for storage; and increasing the conveyance of the Ebroch Burn by altering the footbridge Burngreen Park. This study may also consider the property level protection action.	£30,000 - £50,000	There are 33 residential and 10 non-residential properties at risk during a 200 year river event, with a PVD of £1,679,415.	£1,679,415	2	132 of 168	27 of 32	3 of 4	-	-	C1
Argyll & Bute ***Garelochhead PVA (11/02)***	***Reduce the risk of coastal flooding to residential properties and non residential properties in Garelochhead. Objective ID: 11002.***	***A flood protection study should be carried out to investigate further the lower reaches of the McAuley Burn and to enhance the existing retaining wall in Garelochhead against coastal flooding. This study may also consider property level protection and other complimentary actions.***	***£30,000 - £50,000***	***There are 12 residential and 5 non-residential properties at risk in a 200 year coastal event, with a PVD of £1,305,333.***	***£1,305,333***	***2***	***132 of 168***	***27 of 32***	***5 of 9***	***6***	***Local Knowledge and Flood History***	***C2***
Highland ***Alness PVA (01/10)***	***Reduce flood risk in Alness from the Contullich Burn Objective ID: 101002.***	***A study is recommended to further investigate the feasibility of a flood protection scheme for the Contullich Burn, focusing on trash screens for trees and other large debris (installation/modification of river control structures), sediment management and consideration of property level protection. Other actions may also be considered to develop the most sustainable range of options. The study should look to confirm the business case for flood protection works.***	***<£25,000***	***The standard of protection which could be provided by flood protection works needs to be confirmed by the study. Up to 7 residential and 2 non-residential properties may benefit from flood protection works, potentially achieving benefits of £671,530 over 100 year design life of a flood scheme.***	***£671,530***	***7***	***135 of 168***	***15 of 22***	***16 of 23***	***17***	***Generally agree with ranking***	***C2***
East Ayrshire ***Dalrymple PVA (12/15)***	***Reduce the risk of the River Doon / Primpton Burn flooding to residential properties in Dalrymple. Objective ID: 12031.***	***A flood protection study should be carried out to further investigate the following actions in detail, separately and in combination: a change in operating procedure of Loch Doon for storage to a 10 year SoP; modification of conveyance through a historic bridge; and construction of direct defences. This study may also consider the property level protection action.***	***£30,000 - £50,000***	***There are 29 residential and 3 non-residential properties at risk in a 10 year fluvial event within the benefitting area of the storage action with a PVD of £692,589. There are 125 residential and 8 non-residential properties at risk in a 200 year fluvial event within the benefitting area of the direct defences action with a PVD of £1,069,812.***	***£1,069,812***	***6***	***136 of 168***	***12 of 12***	***4 of 4***	***2***	***-***	***C1***
Aberdeenshire ***Tarland PVA (06/20)***	***Reduce flood risk in Tarland from the Tarland Burn Objective ID: 602001.***	***A flood protection study is recommended to develop the previous work carried out by Aberdeenshire Council to consider flood protection works to reduce the likelihood of flooding in Tarland from the Tarland Burn. Development of the previous work should consider a combination of actions to reduce risk from medium likelihood floods. The flood protection study should primarily focus on modification of conveyance, construction of direct defences, relocation of properties and property level protection, to compare against the previously identified online storage options. Other actions may also be considered in order to develop the most sustainable range of options.***	***£50,000 - £100,000***	***Flood protection works could reduce risk to 22 properties which are estimated to be at risk from the Tarland Burn during medium likelihood floods. Present value benefits of £757,000 could be achieved over the 100 year design life of the scheme.***	***£757,000***	***6***	***136 of 168***	***12 of 16***	***9 of 12***	***8***	***Local understanding of flood risk and flood history***	***C2***
West Lothian ***Bathgate PVA (10/13)***	***Reduce risk to people in Bathgate, Blackridge, Linlithgow and Slamannan from river flooding. Objective ID: 10049.*** ***This study will focus on Bathgate. Studies in other areas area also planned.***	***A Flood Protection Study should assess Sediment Management, Direct flood Defences, Property Relocation and Natural flood management. Natural Flood Management Study should investigate runoff control and Sediment Management. The assessment should also consider these actions in combination and the impacts on flood risk upstream and downstream of each action. There is an opportunity for partnership working with the Almond / Avon reconnection project and Bathgate restoration project.***	***£30k to £120k***	***11 residential properties and 1 non-residential property at risk in a 200 year event in Bathgate with a PVD of £1.0M. 14 residential properties and 2 non residential properties are at risk for a high likelihood event and could benefit from NFM actions.***	***£1,022,705***	***5***	***138 of 168***	***23 of 27***	***3 of 4***	***1***	***This is Falkirk Council priority due to ongoing initiatives and opportunity to collaborate. There are also 2 schemes that do not provide much protection.***	***C1***

Location	Objective	Next Step	Estimated Study Cost	Economic Benefits	PVD Damages	Mon-Monetised Score	Ranking (evidence based)			Ranking (local preference)	Reason	Proposed delivery cycle
Fife East Wemyss PVA (10/05)	Reduce economic damages to residential and non-residential properties caused by river and coastal flooding. Objective ID: 10015.	A Flood Protection Study in East Wemyss should assess Flood Storage, Sediment Management, Modification of Conveyance, Direct flood Defences, Property Relocation and Natural Flood Management including Runoff Control, River/Floodplain Restoration, Sediment Management and Wave Attenuation. The assessment should also consider these actions in combination and the impacts on flood risk upstream and downstream of each action.	£30k to £120k	23 residential properties and 9 non-residential properties at risk in a 200 year event with a PVD (damages avoided) of £0.9M.	£929,659	5	138 of 168	23 of 27	16 of 16	-	-	C1
Shetland ***Walls PVA (04/02)***	***Reduce economic damages and risk to residential and non-residential properties from coastal flooding in Shetland Mainland West. Objective ID: 400201.***	***A hydraulic study is recommended to assess flood risk in Walls Wave action should be considered as part of the study. It is thought that SEPA's strategic flood risk and hazard maps under-estimate flood risk in Walls The study should identify the most sustainable range of actions to address flood risk.***	***<£25,000***	***Potentially there are present value benefits of £923,198 that could be achieved over a 100 year design life of a scheme, should flood protection works be progressed in the future. Seven residential and one non-residential property could benefit.***	***£923,198***	***5***	***138 of 168***	***1 of 3***	***1 of 3***	***3***	***No history of flooding***	***C1***
Highland ***Garve PVA (01/15)***	***Reduce flood risk in Garve from the Black Water Objective ID: 101501.***	***A study is recommended to further investigate the feasibility of a flood protection scheme for Garve, focusing on direct defences, modification of conveyance, and consideration of property level protection for residual risk. Other actions may also be considered to develop the most sustainable range of options. The study should look to confirm the extent and size of defences required and the business case for flood protection works.***	***£25,000 to £50,000***	***Flood protection works could reduce the impact of the flooding to 11 residential and 1 non-residential properties which are currently at medium likelihood of flooding. Benefits of £783,765 could potentially be achieved over 100 year design life of a flood scheme.***	***£783,765***	***5***	***138 of 168***	***16 of 22***	***17 of 23***	***18***	***Generally agree with ranking***	***C2***
Argyll & Bute ***Campbeltown PVA (01/40)***	***Reduce risk in Campbeltown from coastal flooding Objective ID: 104002.***	***A study is recommended to further investigate the feasibility of a flood protection scheme for the coastal frontage of Campbeltown, focusing on direct defences. The study should look to confirm the existing defence levels of structures and the promenade to identify where structures need to be raised and where gaps in the defences need to be filled (i.e. at the piers). Other actions may also be considered to develop the most sustainable range of options.***	***<£25,000***	***Flood protection works could reduce the impact of the flooding of 96 residential and 178 non-residential properties which are currently at medium likelihood of flooding. Benefits of £1,131,975 could potentially be achieved over 100 year design life of a flood scheme. There is potential for disruption to the operational areas of the harbour which would need to be considered and mitigated during the design of the works.***	***£1,131,975***	***4***	***142 of 168***	***17 of 22***	***6 of 9***	***7***	***Local Knowledge and Flood History***	***C2***
Midlothian Dalkeith and Lasswade PVA (10/22)	Reduce economic damages to residential and non-residential properties caused by river flooding. Objective ID: 10077.	A Flood Protection Study in Dalkeith and Lasswade should assess Direct flood Defences and Sediment Management. The assessment should also consider these actions in combination and the impacts on flood risk upstream and downstream of each action.	£30k to £100k	11 residential properties and 3 non-residential properties at risk in a 200 year event with a PVD of £0.6M	£648,898	4	142 of 168	25 of 27	1 of 1	-	-	C1
Argyll & Bute ***Rothesay PVA (11/06)***	***Reduce the risk of combined flooding to residential properties and non residential properties in Rothesay. Objective ID: 11004.***	***A flood protection study should be carried out to further investigate the potential to use Kirk Dam for storage. This study should also consider natural flood management, property level protection and other complimentary actions.***	***£30,000 - £70,000***	***There are 161 residential and 112 non-residential properties at risk in a 200 year river event, with a PVD of £628,378.***	***£628,378***	***4***	***142 of 168***	***29 of 32***	***6 of 9***	***9***	***Local Knowledge and Flood History***	***C2***

Flood Risk Management (Scotland) Act

FRM Strategies – Prioritisation of Actions

Flood Protection Studies_v4.0_DRAFT | Version Date:10/08/2015 | NPWG Meeting 3 (Paper 6)

Location	Objective	Next Step	Estimated Study Cost	Economic Benefits	PVD Damages	Mon-Monetised Score	Ranking (evidence based)			Ranking (local preference)	Reason	Proposed delivery cycle
Highland ***Thurso - Burnside area PVA (01/01)***	***Reduce flood risk in Thurso (Burnside) from the Burnside / Wolf Burn Objective ID: 100103.***	***A study is recommended to further investigate the feasibility of improving conveyance along the Wolf Burn/Burnside Burn and the tributary to the north-west of the Thurso Business Park, and consideration of property level protection for any residual flood risk. Other actions may also be considered in order to develop the most sustainable range of options. The study should look to confirm the extent of works required and the business case for flood protection works. The study should also look to confirm the level of flood risk for Thurso Business Park which may be currently underestimated based on historic flooding.***	***£25,000 to £50,000***	***Flood protection works could reduce the impact of the flooding to 7 residential properties which are currently at medium likelihood of flooding. Present value benefits of £623,864 could be achieved over the 100 year design life of a flood scheme. There may also be additional benefits for the Thurso Business Park, which has historically had flooding problems but is not shown to be at risk in the baseline mapping.***	***£623,864***	***4***	***142 of 168***	***17 of 22***	***18 of 23***	***19***	***Generally agree with ranking***	***C2***
Orkney St. Mary's PVA (03/05)	Reduce risk in St Mary's from coastal flooding Objective ID: 300502.	A flood protection study is recommended to consider a flood protection works for St. Marys. The study should primarily focus on coastal management actions, direct defences and property level protection, but other actions may also be considered in order to develop the most sustainable range of options. As localised extents of defences may only be required the investigation should define the height and extent of the works.	<£25,000	Flood protection works could reduce risk to 7 residential properties and 5 non-residential properties during medium likelihood floods. Present value benefits of £1,082,043 could be achieved over the 100 year design life of a scheme.	£1,082,043	3	146 of 168	4 of 6	4 of 6	4	LA agree with revised priority of 4th.	C1
Outer Hebrides Lochmaddy, Trumisgarry PVA (02/04)	Reduce disruption to roads in North Uist at high risk from coastal flooding Objective ID: 200401.	A study is recommended to investigate what improvements could be made to the existing flapvalve structures (coastal management action) on culverts to reduce coastal flooding of the B893 road as a result of interaction with the small watercourses. The impacts of improvement works would require further assessment. Other actions may also be considered to develop the most sustainable range of options.	<£25,000	The business case for works in this location would need to be developed as part of the study, focusing on the disruption to traffic during high risk floods.	£1,036,393	3	146 of 168	5 of 5	5 of 5	5	Agree that technical ranking is a fair representation of flood risk in the Outer Hebrides	C1
North Lanarkshire Greenacres PVA (11/17/2)	Reduce the risk of river flooding to residential properties in Greenacres. Objective ID: 11037.	A flood protection study should be carried out to investigate further the construction of flood defences around properties in Greenacres. SUDs should be assessed in any future flood study undertaken in the area.	£30,000 - £50,000	There are 59 residential properties at risk in a 200 year event, with a PVD of £780,655.	£780,655	3	146 of 168	30 of 32	4 of 4	-	-	C1
Dumfries and Galloway ***Dalbeattie/ Kipford PVA (14/19)***	***Reduce the risk of coastal flooding to residential properties between Dalbeattie and Kippford. Objective ID: 14026.***	***Initial assessment to refine knowledge of coastal flooding issues is to be made within the second Dumfries and Galloway Shoreline Management Plan. If the SMP identifies the requirement to mitigate flooding an area an in-house flood study should be completed to consider the impacts of road flooding on access to properties.***	***<£20,000***	***There are 4 residential properties at risk in a 200 year coastal event. Less frequent events cause flooding of the road along the sea front and can prevent access to properties.***	***£643,126***	***3***	***146 of 168***	***10 of 11***	***9 of 10***	***10***	***-***	***C2***
Moray ***Portgordon PVA (06/01)***	***Reduce risk in Portgordon from coastal flooding Objective ID: 600101.***	***A flood protection study is recommended to consider flood protection works to reduce the likelihood of flooding to Portgordon from coastal flooding. The flood protection study should include the investigation of coastal management actions and direct defences. Other actions may also be considered to develop the most sustainable range of options.***	***£50,000-£100,000***	***Flood protection works could potentially reduce risk to 37 residential properties and 3 non-residential properties which are identified to be at risk. These are additional to the properties identified at risk in the flood maps. The properties are felt to be underestimated for the high likelihood floods. Based on the current number of properties identified to be at risk, £787,154 of benefits over 100 years would be achieved. With further information on the impact of wave overtopping and flood depths the number of properties at risk could change and the benefits increase.***	***£787,154***	***2***	***150 of 168***	***13 of 16***	***2 of 2***	***1***	***Local Authority is concerned that the potential damages are significantly underestimated in Portgordon. This is based on frequent flood history linked to wave overtopping.***	***C1***

Location	Objective	Next Step	Estimated Study Cost	Economic Benefits	PVD Damages	Mon-Monetised Score	Ranking (evidence based)			Ranking (local preference)	Reason	Proposed delivery cycle
Highland ***Dornoch PVA (01/07)***	***Reduce flood risk in Dornoch from the Dornoch Burn Objective ID: 100701.***	***A study is recommended for Dornoch to investigate the impact on flood risk of structures crossing the burn and potential blockage scenarios. The study should primarily focus on modification of conveyance (removal or replacement of structures), installation/modification of river control structures (trash screens), direct defences (flood walls), and consideration of property level protection for any residual risk. Other actions may also be considered to develop the most sustainable range of options. The study should look to confirm the type and extent of defences required and the business case for flood protection works.***	***£25,000 to £50,000***	***Flood protection works could reduce the impact of flooding to 2 residential and 5 non-residential properties which are currently at medium likelihood of flooding. Present value benefits of £649,888 could be achieved over the 100 year design life of a flood scheme.***	***£649,888***	***2***	***150 of 168***	***19 of 22***	***19 of 23***	***20***	***Generally agree with ranking***	***C2***
Highland ***Newmill PVA (05/08)***	***Reduce economic damages and flood risk to Newmill from the Auldearn Burn Objective ID: 500802.***	***A flood protection study is recommended to consider a scheme for Newmill to reduce risk from Auldearn Burn. The scheme should include investigation of modification of conveyance actions and direct defences. Other actions may also be considered to develop the most sustainable range of options.***	***£25,000 - £50,000***	***Actions identified in the study could potentially reduce risk to 5 residential properties and 1 non-residential property at medium to high likelihood of flooding. The benefits to protect the properties at risk are potentially £547,729.***	***£547,729***	***6***	***152 of 168***	***5 of 6***	***20 of 23***	***22***	***Generally agree with ranking***	***C2***
Highland ***Nairn West PVA (01/17)***	***Reduce flood risk in Nairn West from the Alton Burn Objective ID: 101701.***	***A study is recommended to further investigate the feasibility of a flood protection scheme for Nairn West, focusing on improving road bridges to improve conveyance, and consideration of property level protection for residual risk. Other actions may also be considered to develop the most sustainable range of options. The study should look to confirm the feasibility of improving the road structures and the impact on flood risk, and the business case for flood protection works. Surveys of the road structures may be required.***	***£25,000 to £50,000 (including surveys of road structures)***	***Flood protection works could reduce the impact of the flooding of up to 3 residential and 2 non-residential properties which are currently at medium likelihood of flooding. Benefits of up to £486,917 could potentially be achieved over 100 year design life of a flood scheme.***	***£486,917***	***6***	***152 of 168***	***20 of 22***	***20 of 23***	***21***	***Generally agree with ranking***	***C2***
Shetland Vidlin PVA (04/01)	Reduce economic damages and risk to non-residential properties and community facilities in Vidlin from coastal flooding Objective ID: 400101.	A hydraulic study is recommended to assess flood risk in Vidlin. Wave action should be considered as part of the study. It is thought that SEPA's strategic flood risk and hazard maps under-estimate flood risk in Vidlin. The study should identify the mosts sustainable range of actions to address flood risk.	<£25,000	The baseline mapping identifies the school and church in Vidlin as at high likelihood of flooding. There are no residential properties identified as at risk. There is currently a low level of certainty in the baseline modelling as it does not include wave overtopping. Potentially there are present value benefits of £351,341 which could be achieved over a 100 year life of a future flood scheme. If wave action is considered in the study the potential benefits could be higher.	£351,341	5	154 of 168	2 of 3	2 of 3	2	School and ferry terminal potentially at risk	C1
Argyll & Bute ***Lochgilphead PVA (01/38)***	***Reduce flood risk in Lochgilphead from the Badden Burn Objective ID: 103801.***	***A hydraulic study is recommended to investigate river and coastal flooding in Lochgilphead. The flood risk in the Lochgilphead area is complex due to the interaction of different sources, which are not thought to be currently represented accurately in the baseline flood modelling. A better understanding of the interaction of the Badden Burn with the Crinan Canal and the tide is needed before the feasibility of actions can be appraised in greater detail.***	***£25,000 to £50,000***	***Based on the current baseline potential benefits of £183,093 can be achieved, however, this is likely to be underestimated due to the complex interactions between flood sources.***	***£183,093***	***5***	***154 of 168***	***21 of 22***	***8 of 9***	***4***	***Local Knowledge and Flood History including annual road closures***	***C1***
Argyll & Bute ***Cardross PVA (11/01)***	***Reduce the risk of river / surface water flooding to residential properties and community facilities in Cardross. Objective ID: 11001.***	***A flood protection study should be carried out to investigate further the construction of storage areas upstream of the Moore's Bridge and to assess the drainage in Cardross. This study may also consider property level protection and other complimentary actions.***	***£20,000 - £30,000***	***There are 10 residential and 1 non-residential properties at risk in a 100 year fluvial event with a PVD of £602,388.***	***£602,388***	***4***	***156 of 168***	***31 of 32***	***9 of 9***	***8***	***Local Knowledge and Flood History***	***C2***

Location	Objective	Next Step	Estimated Study Cost	Economic Benefits	PVD Damages	Mon-Monetised Score	Ranking (evidence based)			Ranking (local preference)	Reason	Proposed delivery cycle
Glasgow City Gorbals PVA (11/13)	Reduce the risk of River Clyde / coastal flooding to non residential properties and community facilities in Gorbals. Objective ID: 11017.	The Gorbals Tidal weir morphology study should be progressed. This study should also investigate the potential risk to the City of Glasgow College, Glasgow Sherrif Court and Glasgow Central Mosque and the potential benefit of property level protection.	Unknown	Unknown	£321,563	4	156 of 168	31 of 32	8 of 8	-	-	C1
Shetland ***Cunningsburgh PVA (04/03)***	***Reduce disruption to the A970 road, economic damages and risk to residential and non-residential properties in the Cunningsburgh area from river flooding. Objective ID: 400301.***	***The A970 is the key road linking the southern end of the mainland, including the airport at Sumburgh, to the rest of Shetland. Flooding in the Cunningsburgh area causes significant disruption to residents, commuters, and visitors. Therefore a study should be undertaken to assess direct defences upstream of the A970 on the Burn of Laxdale and Burn of Mail and improvements to the conveyance through the culverts underneath the road. Other actions may also be considered to develop the most sustainable range of options.***	***<£25,000***	***If protection works are taken forwars, they will benefit one residential property and one non-residential property, along with the A970 road (key road linking the southern end of the mainland, including the airport at Sumburgh, to the rest of Shetland). There is currently a low level of certainty in the baseline modelling; it is thought to underestimate the flood risk in the Cunningsburgh area based on the recent flood history. It is not possible to estimate the potential benefits of flood protection works at this stage; the potential benefits should be identified as part of the study.***	***£321,563***	***4***	***156 of 168***	***3 of 3***	***3 of 3***	***1***	***History of flooding to property and disruption of road between Lerwick and Sumburgh airport***	***C1***
Highland ***Thurso (River Thurso) PVA (01/01)***	***Reduce risk in Thurso (Riverside area) from coastal flooding.*** ***Reduce flood risk in Thurso from the River Thurso. Objective ID: 100101, 100102.***	***A hydraulic study is recommended to investigate flood mechanisms, as SEPA's strategic maps are thought to misrepresent current flooding mechanisms and underestimate flood risk. The study is to look at combined coastal and river flooding. Following the improvements to the modelling, the study should focus on coastal revetments, direct defences and property level protection should be progressed if justified by the level of flood risk. Other actions may also be considered in order to develop the most sustainable range of options.***	***£25,000 to £50,000***	***Currently the baseline modelling is thought to underestimate the impacts of flooding. Improved understanding of the flood extents will allow the potential benefits for any flood works to be confirmed. Based on existing flood risk and hazard maps present value benefits of £233,800 could be achieved over the 100 year design life of a flood scheme. The potential benefits are likely to be higher if flood risk is underestimated.***	***£233,800***	***4***	***156 of 168***	***22 of 22***	***22 of 23***	***11***	***Current modelling doesn't fully reflect river and coastal flooding issues. Floods approximately annually and political pressure to improve the flood risk situation.***	***C1***
Highland ***Aviemore (Aviemore Burn) PVA (05/11)***	***Reduce economic damages and flood risk to Aviemore from the Aviemore Burn Objective ID: 501102.***	***A hydraulic study is to be taken forward to confirm flood risk in Aviemore from the Aviemore Burn. Currently SEPA's flood risk and hazard maps do not match historic flood extents.***	***0***	***Two non-residential properties and two residential properties are shown to be at medium likelihood of flooding in SEPA's flood risk and hazard maps. Based on available data, the present value benefits of £82,723 could be achieved over the 100yr design life of a scheme. However, this is to be confirmed through the study.***	***£82,723***	***4***	***156 of 168***	***6 of 6***	***22 of 23***	***23***	***Generally agree with ranking***	***C2***
West Lothian Blackridge PVA (10/13)	Reduce risk to people in Bathgate, Blackridge, Linlithgow and Slamannan from river flooding. Objective ID: 10049. This study will focus on Blackridge. Studies in other areas area also planned.	A Flood Protection Study should assess Sediment Management and Modification of Conveyance with focus on existing culverts. The assessment should also consider these actions in combination and the impacts on flood risk upstream and downstream of each action.	£30k to £100k	5 residential properties and 3 non-residential properties at risk in a 200 year event (fluvial / surface water) in Blackridge with a PVD of £0.05M.	£54,528	4	156 of 168	26 of 27	4 of 4	4	-	C1

Location	Objective	Next Step	Estimated Study Cost	Economic Benefits	PVD Damages	Mon-Monetised Score	Ranking (evidence based)			Ranking (local preference)	Reason	Proposed delivery cycle
Aberdeenshire ***Roanheads, Peterhead. PVA (06/08)***	***Reduce risk in Peterhead from coastal flooding Objective ID: 600801.***	***A flood protection study is currently under development by Peterhead Port Authority to consider flood protection works to reduce the likelihood of flooding to Roanheads in Peterhead from coastal flooding. If flood protection works are not carried out by the Port Authority, the flood protection study should be developed to consider the impact from wave overtopping and primarily focus on coastal management actions, direct defences, relocation and property level protection, but other actions may also be considered in order to develop the most sustainable range of options.***	***£25,000 - £50,000***	***Flood protection works could reduce risk to 6 residential properties and 1 non-residential property. These properties are indicated to be at risk from local knowledge and were not identified in the SEPA flood maps as the properties are at risk from wave overtopping which is not estimated in the strategic flood maps. Based on the properties identified to be at risk, present value benefits of £100,795 could be achieved over the 100 year design life of the scheme. With further information on the impact of wave overtopping and flood depths, these benefits could change.***	***£100,795***	***3***	***162 of 168***	***14 of 16***	***10 of 12***	***11***	***Local understanding of flood risk and flood history***	***C2***
Orkney ***Churchill Barriers PVA (03/07)***	***Reduce disruption to roads at high risk from coastal flooding, in particular the causeways on the Churchill Barriers Objective ID: 300702.***	***A flood protection study is progressing to reduce flooding to Churchill Barrier 2 from high likelihood floods. The study is primarily focusing on coastal management actions and wave attenuation to minimise the impact of waves, but other actions may also be considered in order to develop the most sustainable range of options.***	***£25,000 - £50,000***	***Reducing the impacts of flooding for Churchill Barrier 2 during high likelihood floods would result in an economic benefit of £37,352 due to reduce flood damages to the road. There are wider benefits that are unable to be quantified and should be considered within the ongoing study when considering the actions.***	***£37,352***	***3***	***162 of 168***	***5 of 6***	***5 of 6***	***1***	***There is huge economic disruption if the road is closed- however current methodology does not allow SEPA to take this in to account.***	***C1***
Orkney Ayre Road PVA (03/06)	Reduce disruption to roads at high risk from coastal flooding with particular reference to the causeway linking Hoy to South Walls Objective ID: 300601.	A flood protection study for the causeway is recommended to investigate the most suitable action for long term maintenance of the road. The study should primarily focus on coastal management actions to strengthen the existing road or actions to raise the height of the existing road, but other actions may also be considered in order to develop the most sustainable range of actions.	<£25,000	Reducing the flood impacts to the road (B9047) for high likelihood floods would result in an economic benefit of £1,014 due to reduce flood damages to the road. Although the quantified flood damages are small, there are wider benefits that are unable to be quantified and should be considered in the study when considering the actions.	£304,902	2	164 of 168	6 of 6	6 of 6	6	This road is less often flooded than the Churchill Barriers.	C1

Location	Objective	Next Step	Estimated Study Cost	Economic Benefits	PVD Damages	Mon-Monetised Score	Ranking (evidence based)			Ranking (local preference)	Reason	Proposed delivery cycle
Aberdeenshire ***Banff PVA (06/03)***	***Reduce risk in Banff from the River Deveron and coastal flooding Objective ID: 600301.***	***A flood protection study is recommended to consider flood protection works to reduce the likelihood of flooding to Banff from coastal flooding. The flood protection study should primarily focus on coastal management actions, direct defences, relocation and property level protection, but other actions may also be considered in order to develop the most sustainable range of options. The study should assess the impact from wave overtopping to confirm the existing risk and define the height and extent of flood protection works required.***	***£25,000 - £50,000***	***Flood protection works could reduce risk to 7 residential properties and 3 non-residential properties identified to be at risk from medium likelihood coastal floods. These properties are indicated to be at risk from local knowledge and were not identified in the SEPA flood maps as the properties are at risk from wave overtopping which is not estimated in the strategic flood maps. Based on the properties identified to be at risk, present value benefits of £149,587 could be achieved over the 100 year design life of the scheme. With further information on the impact of wave overtopping and flood depths, these benefits could change.***	***£149,587***	***2***	***164 of 168***	***15 of 16***	***11 of 12***	***10***	***Local understanding of flood risk and flood history***	***C2***
City of Edinburgh ***Edinburgh: Gogar Burn PVA (10/27)***	***Reduce risk to community facilities caused by river flooding. Objective ID: 10090.***	***A Flood Protection Study should assess Direct flood Defences and Sediment Management. The assessment should also consider these actions in combination and the impacts on flood risk upstream and downstream of each action. This study should also aim to improve the accuracy of the flood mapping in the Gyle/ Gogar Burn area.***	***£30k to £100k***	***1 community facility (airport fire station) at risk in a 200 year event.***	***£160,782***	***1***	***166 of 168***	***27 of 27***	***3 of 3***	***3***	***Shifted to C2 following review after NPWG2***	***C2***
Aberdeenshire Portsoy PVA (06/02)	Reduce flood risk in the vicinity of Loch Soy and Soy Avenue Objective ID: 600201.	A flood protection study is recommended to consider flood protection works to reduce the likelihood of flooding to Soy Avenue, this should build on a previous study on Soy Burn. The study should firstly confirm the existing flood risk prior to developing actions within the study. The flood protection study should then primarily focus on storage, sediment management, runoff control, river/floodplain restoration, modification of conveyance, property level protection and relocation to reduce the likelihood of flooding from the Soy Burn, but other actions may also be considered in order to develop the most sustainable range of options.	£25,000 - £50,000	Flood protection works could reduce risk to 10 residential properties. The properties at risk are estimated and will be verified within the study. Based on the 8 properties at risk, present value benefits of £138,915 could be achieved over the 100 year design life of a flood scheme. With confirmation of the number of properties at risk and flood depths in the flood protection study, these benefits could change.	£138,915	1	166 of 168	16 of 16	12 of 12	12	Local understanding of flood risk and flood history	C2
Dumfries and Galloway Moniaive PVA (14/25c)	Accept standard of protection offered by Moniaive Flood Protection Scheme. Objective ID: 14038.	Flood protection study in Moniaive to assess the current level of risk and assess mitigation options if required	0	0	£0	0	168 of 168	11 of 11	10 of 10	-	-	C1

The following table lists all of the standalone NFM Studies. NFM Studies are assumed C1 delivery unless otherwise identified.

Local Authority	Location	Objective	Indicators	Next-Step	Estimated Cost of Next Step
Aberdeen City	LPD6 (06/19)	Reduce flood risk in Peterculter from the Culter Burn (601901)	£504,966 annual average damages from residential properties, an estimated 429 people at risk from medium likelihood floods	A natural flood management study is recommended to assess river/floodplain restoration and sediment management actions to reduce the likelihood of flooding. This is to be taken forward with the Priority Catchments work and the Deeside Catchment Partnership.	<£25,000
Angus	South Esk (PVA 07/05)	Reduce risk to people in Brechin caused by flooding from the River South Esk	191 people at risk (1:200 year event)	South Esk pilot catchment project aims to identify and prioritise opportunities for delivering improvements to river habitats whilst helping to reduce flood risk. Phase 1 study has been completed and SEPA is currently in discussion with landowners with regard to taking forward some sites to options appraisal and outline design.	£20k to £50k
CaLL discussions to determine lead	White Cart Catchment (11/13)	Reduce the risk of river flooding to residential properties and non residential properties from the White Cart Water.	665 Residential properties; 259 Non-Residential properties; 1.3km of Road, Annual average damages of £980,832.	A catchment wide natural flood management study is recommended to consider how actions can be used to complement the existing scheme along with other areas in the White Cart Water catchment. The study should investigate the impact of combining the sediment management and runoff control actions from all the objectives within the White Cart Water catchment. These actions may benefit areas in Glasgow City, East Renfrewshire and Renfrewshire.	£40K-£60K
CaLL discussion to determine lead	Rutherglen (11/14)	Reduce the risk of combined flooding to residential properties and non residential properties in Shawfield / Croftfoot and Castlemilk	40 Residential properties; 36 Non-Residential properties; 0.4km of Road, Annual average damages of £321,758.	A natural flood management study should be undertaken to further investigate in detail the potential benefit for runoff control to Croftfoot. This action may be covered in a catchment wide NFM study to consider the impact of combining the NFM actions from all the objectives within the catchment of the Mallsmire Burn/Polmadie Burn/Cityford Burn. However if a catchment wide study is not progressed this action may be considered within the flood protection study. These actions may benefit areas in Glasgow City and South Lanarkshire.	£20K-£40K
CaLL discussion to determine lead	Kilsyth to Bearsden - North of Glasgow City (11/04)	Reduce the risk of Allander Water / surface water flooding to residential properties and non residential properties in Milngavie. (11011)	185 Residential properties; 90 Non-Residential properties, Annual average damages of £691,618.	A natural flood management study should be undertaken to further assess in detail the potential to reduce the impact of flooding using NFM. Large areas of potential have been identified within the River Kelvin catchment for runoff control and floodplain restoration within the catchment. Other complimentary actions should be investigated as part of the study. These actions may benefit towns within East Dunbartonshire Council and Glasgow City Council.	£20K-£40K
Dumfries & Galloway	Ecclefechan - Annan (14/08)	Reduce the risk of river flooding to residential and non-residential properties in Ecclefechan.	50 Residential properties; 4 Non-Residential properties, Annual average damages of £73,803.	A Natural Flood Management Study should be undertaken to further assess in detail the potential for runoff control to Ecclefechan. This study should be progressed in Cycle 2.	£20,000 - £40,000
East Dunbartonshire	Kilsyth to Bearsden - North of Glasgow City (11/04)	Reduce the risk of river / surface water flooding to residential properties, non residential properties, community facilities and transport (roads) in Kirkintilloch. (11008)	505 Residential properties; 128 Non-Residential properties; 2.8km of road, Annual average damages of £687,325.	SEPA are currently carrying out a pilot study: Potential options for river restoration and natural flood management in the Glazert catchment. This study should assess in detail runoff control and floodplain restoration. This action may also impact areas downstream of Kirkintilloch within the River Kelvin catchment.	
East Dunbartonshire	Kilsyth to Bearsden - North of Glasgow City (11/04)	Reduce the risk of Park Burn /surface water flooding to residential properties in Kirkintilloch. (11009)	46 Residential properties,Annual average damages of £86,038.	A NFM study should be carried out to understand the actions that could benefit the Park Burn FPS.	£20K-£40K
East Dunbartonshire	Kilsyth to Bearsden - North of Glasgow City (11/04)	Reduce the risk of Allander Water / surface water flooding to residential properties and non residential properties in Milngavie. (11011)	185 Residential properties; 90 Non-Residential properties, Annual average damages of £691,618.	A natural flood management study should be undertaken to further assess in detail the potential to reduce the impact of flooding using NFM. Large areas of potential have been identified within the River Kelvin catchment for runoff control and floodplain restoration within the catchment. Other complimentary actions should be investigated as part of the study. These actions may benefit towns within East Dunbartonshire Council and Glasgow City Council.	£20K-£40K

Local Authority	Location	Objective	Indicators	Next-Step	Estimated Cost of Next Step
East Lothian	Musselburgh (10/21)	Reduce economic damages to residential and non-residential properties in Musselburgh caused by flooding from the River Esk and coastal flooding. (10075)	£1,574,382 Annual Average Damages (Residential Properties)	A Natural Flood Management Study should assess Wave Attenuation. The assessment should also consider the potential benefits and disbenefits to locations both upstream and downstream. The study should be linked to the flood protection works.	£20k to £50k
Fife Council	(10/07)	Reduce economic damages to residential and non-residential properties caused by coastal flooding. (10025)	£122,648 Annual Average Damages (Residential Properties) £128,076 Annual Average Damages (Non-Residential Properties)	A Natural Flood Management Study should assess Wave Attenuation in Torryburn.	£20k to £50k
Fife Council	(07/19)	Reduce economic damages to residential and non-residential properties caused by river flooding. (7053)	£138,471 Annual Average Damages (Residential Properties) £13,264 Annual Average Damages (Non-Residential Properties)	A natural flood management study for Dunshalt, Freuchie Mill and Kingskettle should assess river/ floodplain restoration and sediment management. The assessment should also consider the potential benefits and disbenefits to locations both upstream and downstream.	£50k to £100k
Glasgow City are ins discussion to determine lead	Yoker Catchment - Clyde (Clydebank to Partick) (11/05)	Reduce the risk of river / surface water flooding to residential properties, non residential properties and transport (roads) in Yoker Mains and Yoker Burn catchments.	373 Residential properties 48 Non-Residential properties, 3.0 km of Road, Annual average damages of £1,176,258.	A natural flood management study should be undertaken to further investigate in detail the potential benefit for runoff control to Bearsden. This action may be considered within the flood protection study.	£20K-£40K
Glasgow City are ins discussion to determine lead	Rutherglen (11/14)	Reduce the risk of Spittal Burn / surface water flooding to residential properties in Castlemilk.	504 Residential properties, Annual average damages of £602,640.	A natural flood management study should be undertaken to further investigate in detail the potential benefit for runoff control to Castlemilk. – This may be incorporated into a larger NFM study This action may be covered in a catchment wide NFM study to consider the impact of combining the NFM actions from all the objectives within the catchment of the Mallsmire Burn/Polmadie Burn/Cityford Burn. However if a catchment wide study is not progressed this action may be considered within the flood protection study and/or surface water management plan. Glasgow City Council to look at areas that are being proposed in terms of benefit and action locations.	£20K-£40K
Glasgow City are ins discussion to determine lead	Rutherglen (11/14)	Reduce the risk of combined flooding to residential properties and non residential properties in Shawfield.	184 Residential properties; 111 Non-Residential properties, Annual average damages of £440,167.	The potential for runoff control, floodplain restoration and sediment management in Richmond Park should be further considered in detail in the Shawfield Masterplan. A catchment wide NFM study is recommended to consider the impact of combining the NFM actions from all the objectives within the catchment of the Mallsmire Burn/Polmadie Burn/Cityford Burn. Glasgow City Council to look at areas that are being proposed in terms of benefit and action locations to determine lead – this may be incorporated into a larger NFM study.	
Inverclyde	Kilmacolm (11/21c)	Reduce the risk of Glenmosston Burn flooding to residential properties and non residential properties in Kilmacolm.	10 Residential properties, 1 Non-Residential properties,	A natural flood management study should be carried out to further investigate the potential benefit for floodplain restoration at Glen Moss in Kilmacolm. These actions should help complement the protection that will be offered by the Glenmosston Burn works. Scoping study is to be carried out by Inverclyde to inform future direction of the NFM study. Discussions with SNH are required to investigate potential for natural flood management within the SSSI area. The timescale for this study is cycle 1.	
North Ayrshire	Upper Garnock Catchment (12/04)	Reduce the risk of river / surface water flooding to residential properties and non residential properties in Kilbirnie, Glengarnock and Longbar.	783 Residential properties, 100 Non-Residential properties, Annual average damages of £719,414.	A natural flood management study should be undertaken to further investigate in detail the potential benefit for runoff control and sediment management to Kilbirnie and Glengarnock. Natural flood management has been looked at as part of the potential works, however it is recommended that further consideration should be made to detail the potential benefit in the tributaries of the River Garnock.	£20K-£40K

Local Authority	Location	Objective	Indicators	Next-Step	Estimated Cost of Next Step
Perth & Kinross	(07/12)	Reduce economic damages to residential and non-residential properties in Invergowrie and Dundee caused by flooding from the Invergowrie Burn. (7031)	£110,677 Annual Average Damages (Residential Properties)	A Natural Flood Management Study should assess River/Floodplain Restoration and Sediment Management. The assessment should also consider the potential benefits and disbenefits to locations both upstream and downstream.	£20k to £50k
Perth & Kinross	(08/04)	Reduce economic damages to residential and non-residential properties in Alyth from the Alyth Burn. (8007)	£84,098 Annual Average Damages (Residential Properties)	A Natural Flood Management Study should assess River/Floodplain Restoration and Sediment Management. The assessment should also consider the potential benefits and disbenefits to locations both upstream and downstream.	£20k to £50k
Renfrew-shire	Black Cart Catchment - Lochwinnoch to Johnstone (11/12)	Reduce the risk of Kilbarchan Burn / surface water flooding to residential properties, non residential properties and transport (roads) in Kilbarchan.	41 Residential properties; 26 Non-Residential properties; 0.6 km of Road, Annual average damages of £59802.	A natural flood management study should be carried out to further investigate the potential benefit for sediment management at Kilbarchan. This action may be considered within the flood protection study (110500006) depending on funding streams.	£20K - £40K
Renfrew-shire	Black Cart Catchment - Lochwinnoch to Johnstone (11/12)	Reduce the risk of river flooding to residential properties, non residential properties and transport (roads) in Lochwinnoch.	62 Residential properties; 26 Non-Residential properties; 1.1km of Road, Annual average damages of £139,878.	A natural flood management study should be carried out to further investigate the potential benefit for runoff control and sediment management in Lochwinnoch. This may be carried out as a separate study or as part of the flood protection study within this area (110520006) depending on funding streams.	£20K - £40K
Renfrew-shire	White Cart Catchment (11/13)	Reduce the risk of Espedair Burn / Gleniffer Burn / surface water flooding to residential properties, non residential properties, community facilities and transport in Paisley.	665 Residential properties; 259 Non-Residential properties; 1.3km of Road, Annual average damages of £980,832.	A catchment wide natural flood management study is recommended to consider how actions can be used to complement the existing scheme along with other areas in the White Cart Water catchment. The study should investigate the impact of combining the sediment management and runoff control actions from all the objectives within the White Cart Water catchment.	£20K - £40K
Scottish Borders	(13/04)	Reduce economic damages to residential and non-residential properties and flood risk to community facilities in Galashiels and Stow caused by flooding from the Gala Water and River Tweed. (13015)	£140,982.52 Annual Average Damages (Residential Properties) £508,243 Annual Average Damages (Non-Residential Properties) 2 x Educational Buildings	A Natural Flood Management Study should assess Runoff Control and River/Floodplain Restoration and Sediment Management. The assessment should also consider the potential benefits and disbenefits to locations both upstream and downstream. NFM was not part of the Gala scheme therefore the LA keen to look at NFM options.	£20k to £50k
Scottish Borders	(13/12)	Reduce economic damages to residential, non-residential and community properties in Hawick caused by flooding from the River Teviot.	£793,227 Annual Average Damages (Residential Properties) £901,232 Annual Average Damages (Non-Residential Properties) 1 educational building 1 child day care centre. 1,228 People at Risk (1 in 200 year event).	A Natural Flood Management Study should assess Runoff control and Sediment Management. The assessment should also consider the potential benefits and disbenefits to locations both upstream and downstream. To be undertaken in cycle 1.	£20k to £50k

Local Authority	Location	Objective	Indicators	Next-Step	Estimated Cost of Next Step
South Lanarkshire	(13/07)	Reduce economic damages to residential and nonresidential properties in Biggar caused by flooding from the Biggar Burn. (13021)	£58,604 Annual Average Damages (Residential Properties) £43,857 Annual Average Damages (Non-Residential Properties)	A Natural Flood Management Study should assess the following: River/Floodplain Restoration and Sediment Management. The assessment should also consider the potential benefits and disbenefits to locations both upstream and downstream. The study should be carried out in conjunction with the flood protection study.	£20k to £50k
Stirling	(09/01)	Reduce economic damages to residential and non-residential properties in Aberfoyle caused by flooding from the River Forth. (9002)	£101,217 Annual Average Damages (Residential Properties) £123,798 Annual Average Damages (Non-Residential Properties)	This is an ongoing Duchrie catchment pilot study looking at a range of Natural Flood Management options including Runoff control and Sediment Management. Timescales for completion 2016. The study should inform any future flood protection studies. Undertaken in partnership with National Park and Forestry Commission.	£20k to £50k
West Dunbartonshire	Loch Lomond and Vale of Leven (11/01)	Reduce the risk of River Leven / coastal flooding to residential properties, non residential properties and community facilities in Vale of Leven and Dumbarton.	2592 Residential properties; 524 Non-Residential properties, Annual average damages of £15,128,544.	A natural flood management study should be undertaken by LLTNP in partnership with West Dunbartonshire Council to further investigate in detail the potential benefit for runoff control to Loch Lomond.	£20K - £40K
West Lothian	(10/13)	Reduce risk to people in Bathgate, Blackridge, Linlithgow and Slamannan from river flooding. (10049)	241 People at Risk (1 in 200 year event)	A Natural Flood Management Study should assess Runoff control and Sediment Management. The assessment should also consider the potential benefits and disbenefits to locations both upstream and downstream. The study should be carried out in conjunction with the flood protection study and in collaboration with Falkirk Council.	£20k to £50k

SCOTTISH BORDERS COUNCIL - PRIORITISATION OF ACTIONS DELIVERY PLAN SUBJECT TO SCOTTISH GOVERNMENT FUNDING

FLOOD PROTECTION SCHEMES	SCHEME WHOLE LIFE COSTS (£)	NATIONAL RANKING	LOCAL PLAN DISTRICT RANKING	LOCAL AUTHORITY RANKING	PROPOSED DELIVERY CYCLE	NOTES
Hawick	29.2m	14 of 40	1 of 1	1 of 1	C1 (2016 - 2022)	Proposed Work 2019 - 2022

FLOOD STUDIES	ESTIMATED COST OF STUDY (£)	NATIONAL RANKING	LOCAL PLAN DISTRICT RANKING	LOCAL AUTHORITY RANKING	PROPOSED DELIVERY CYCLE	2016 2017 2018 2019 2020 2021 2022
PVA 10/26 - Berwickshire Coast Shoreline Management Plan **Eyemouth Coastal Flood Protection Scheme** Flood Study	120k	66 of 168	10 of 27	4 of 6	C1 (2016 - 2022)	
PVA 13/04 - Eddleston, Peebles, Innerleithen etc & PVA 13/08 Broughton **Peebles, Innerleithen & Broughton Flood Protection Schemes** Flood Study	200k	1 of 168	1 of 5	1 of 6	C1 (2016 - 2022)	
PVA 13/05 - Earlston **Earlston Flood Protection Scheme** Flood Study	90k	25 of 168	2 of 5	2 of 6	C1 (2016 - 2022)	
PVA 14/03 - Newcastleton **Newcastleton Flood Protection Scheme** Flood Study	25k	98 of 168	9 of 11	5 of 6	C1 (2016 - 2022)	
PVA 14/10 - Jedburgh **Jedburgh (Jed Water) Flood Protection Scheme** Flood Study	110k	43 of 168	3 of 5	3 of 6	C2 (2022 - 2028)	
PVA 13/13 - Bonchester Bridge **Bomchester Bridge Flood Protection Scheme** Flood Study	60K	116 of 168	4 of 5	6 of 6	C2 (2022 - 2028)	

NATURAL FLOOD MANAGEMENT STUDIES	ESTIMATED COST OF STUDY (£)	NOTES	PROPOSED DELIVERY CYCLE
PVA 31/04 - Galashiels & Stow NFM Study - Gala Water	30k	Supplement the Gala FPS with potential benefits for Stow	TBC
PVA 13/12 - Hawick NFM Study - River Teviot	30k	In addition to the Hawick FPS	C1 (2016 - 2022)

SURFACE WATER MANAGEMENT PLANS	ESTIMATED COST OF STUDY (£)	NOTES	PROPOSED DELIVERY CYCLE	2016 2017 2018 2019 2020 2021 2022
Galashiels, Melrose, Tweedbank	60k	Gala Integrated catchment Study with Scottish Water (55k) will feed into the SWMP.	C1 (2016 - 2022)	
Hawick	20k		C1 (2016 - 2022)	
Peebles	30k		C1 (2016 - 2022)	
Newcastleton	15k		C1 (2016 - 2022)	
Jedburgh	15k		C2 (2022 - 2028)	
Kelso	15k		C2 (2022 - 2028)	

IMPROVED UNDERSTANDIING	NOTES
Eyemouth Coastal	This action is to improve the Flood Hazard Maps. SEPA has highlighted an issue with the model in this area. SEPA will address this issue in cycle 1 which ties in with the Eyemouth Flood Study which will also be used to improve the mapping.

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ONE YEAR ON FROM THE ACT: A REVIEW OF SCOTTISH BORDERS COUNCIL'S IMPLEMENTATION OF THE SOCIAL CARE (SELF DIRECTED SUPPORT) (SCOTLAND) ACT 2013

Report by Chief Social Work Officer

SCOTTISH BORDERS COUNCIL

27 August 2015

1 PURPOSE AND SUMMARY

1.1 This report proposes to inform Council of progress in implementing the duties of the Social Care (Self-directed Support) (Scotland) Act 2013 which came into force on 1 April 2014. Whilst the Act applies to all age groups, the report focuses on implementation within adult services.

1.2 The Social Care (Self-directed Support) (Scotland) Act 2013 (the Act) came into force in April 2014. Its aim is to ensure that people eligible for social care support have control and choice over their support arrangements. When the Act was introduced there were 97 people who had already chosen to have support through the self-directed support pilot. The pilot evaluation showed positive outcomes for individuals and their carers on all outcomes e.g. feeling safe, feeling healthy, having things to do. There has been significant work since then to extend and ensure effective implementation, including a staff training programme and the recruitment of support planners to provide support to teams. In April 2015 the Council also introduced a new charging policy which included new charges for people using self-directed support (SDS).

1.3 As of August 2015 there are 349 people receiving support through the Act. In order to ensure that new duties are being met a review has been undertaken and this report identifies the key findings from this. The review was informed by people using the self-directed support (SDS) approach, social work managers and practitioners, and providers who responded to a questionnaire. There was an excellent response from SDS users, with 32% of people returning the questionnaire.

1.4 There are a range of new duties within the Act. People who receive support through SDS were asked about their experience of the Council in relation to these duties. Staff were asked to comment on what was working well within SDS and to state the key challenges or barriers. The key new duties are:

a) As part of the assessment and provision of support there is a duty to have regard to the general principles of involvement, informed choice, collaboration, and participation and dignity;
b) To inform people of the options to manage their support;
c) To inform people of their budget;

d) To promote a variety of providers and a variety of support.

1.5 The majority of people felt that the Council was fully adhering to the duties of the Act. In some duties it is recognised that there is a need for further progress. This Act is in year five of a ten year national SDS strategy, and it is recognised nationally that this is a large scale transformational change that will take time. The questionnaire responses from social work staff and providers have helped to identify what is working well within SDS and what are the challenges. Most staff are very positive about SDS and its focus on the person's choices and outcomes.

1.6 Learning from the review has confirmed that key areas to address include an urgent need for the SDS documentation to be incorporated into the social work information system, frameworki; the need for a review of the resource allocation system to follow from this; the extension of public information; opportunities for continuous learning and the need for continuing leadership support with the change.

2 RECOMMENDATIONS

2.1 **I recommend that the Council:-**

a) Note the Council's progress in meeting the duties under the Act;

b) Endorse key actions to progress implementation as detailed below:

i) Implement the new paperwork to reflect SDS. This will provide people with clear information about the option chosen, and on the budget for their support. It will also reduce paperwork for practitioners.

ii) Collect information on whether people's outcomes are being through their support and report on this.

iii) Promote cultural change through the organisation by continuing to facilitate shared learning amongst stakeholders. This should improve understanding about SDS.

iv) Meet our duty to provide information on a range of resources within service provision and the community by exploring the provision of a resource directory with providers and the third sector.

v) Consider how an outcomes approach can be integrated into budget allocation decisions. This should provide a robust system for allocating budget that takes into account how people want to meet their needs.

vi) Review commissioned services in light of demand for more options.

3 BACKGROUND

3.1 The Social Care (Self-directed Support) (Scotland) Act 2013 came into force on 1 April 2014. The Act provides a legal framework for a ten year national strategy for SDS which is now in year five. There are new duties within the Act for local authorities and a review has been undertaken of the Council's implementation of these duties within adult services.

3.2 The key new duties for local authorities are the following:
a) As part of the assessment and provision of support there is a duty to have regard to the general principles of involvement, informed choice, collaboration, and participation and dignity;
b) To inform people of the options to manage their support;
c) To inform people of their budget;
d) To promote a variety of providers and a variety of support.

3.3 In anticipation of the Act, and the significant process and cultural change required, the Council introduced a pilot phase of learning and by 1 April 2014 there were 97 people receiving support through SDS. The pilot evaluation showed positive outcomes for individuals and their carers on all outcomes e.g. feeling safe, feeling healthy, having things to do. As of August 2015 there are 349 people receiving support through SDS plus 125 people receive a direct payment through the traditional route. Plans for implementation within children's services are developing and will start from a base of 40 children already having a direct payment.

3.4 There has been significant work to support the implementation of the Act and this has been facilitated by transitional funding from the Scottish Government. Staff have been recruited to support the social care and health teams with the change, and there has been an extensive programme of training. There has been work with providers to broaden the range of options, and SBCares, an arm's length company, was formed with the expectation that over the next year it will provide a cost effective service with support available to people through the four options. The Scottish Government has also funded the third sector organisations, Encompass and BIAS (Borders Independent Advocacy Service) to support individuals with SDS, and ARC (Association for Real Change) Scotland to support providers.

3.5 The review has been informed by questionnaires which were sent in early June 2015 to the 316 people using the SDS approach at that time. An online questionnaire was sent to staff with specific questions for social work practitioners, for managers, commissioners and for providers. Performance information collected by the Finance service was also used, as was information from a sample of SDS documents.

4 THE VIEWS OF PEOPLE USING SELF-DIRECTED SUPPORT

4.1 There was an excellent response rate of 32% from people using the SDS approach. There was a particularly high response rate from Berwickshire and from people supported by the learning disability team. Of the 100 questionnaires which were returned 39 were from people with a learning disability who were supported by the learning disability team, and they received an easy read version. The questionnaire asked people about their experience of the Council in fulfilling its duties under the Act.

4.2 Five of the questions relate to the five principles of involvement, informed choice, collaboration, participation and dignity that must be adhered to through the assessment and provision of support. The majority of people felt that all principles were met. The lowest overall rating was for the provision of information on a range of resources in order to make an informed choice. However, there were 84% of people who felt they were given plenty or some information. Being treated with dignity had the highest rating as 91% of people felt that they were always or sometimes treated with dignity.

4.3 There is a duty to offer each person four options for managing their support. These options are:

a) direct payment – the person is paid the money and manages their support, it is the only option where people can employ their own staff;
b) individual service fund – the person chooses a provider and the detail of their support and the council pays the provider;
c) social work managed support- the care manager arranges the support;
d) a mix of any of these.

4.4 The questionnaire asked people if they were told about these four options and 59% replied 'yes'. The Council should also let people know the cost of their support and 61% replied that 'yes' they knew their budget.

4.5 It is interesting to note that for the first time since the introduction of the Act there are more people choosing the social work managed option through SDS than a direct payment. This may in part reflect concern about the new responsibilities and additional cost for employers through national changes in statutory sick pay and auto enrolment for pensions.

4.6 The Council has a duty to promote a variety of providers and range of support. The fact that the duty to provide information on a range of resources had the lowest rating may confirm the comments from some individuals that there was not enough choice as there was no available provider.

5. THE VIEWS OF SOCIAL WORK STAFF AND PROVIDERS

5.1 Social work staff and managers, providers and commissioners were asked, through a series of questions, to comment on what worked well and what were the barriers to SDS implementation. They were also asked to comment on further learning opportunities that would assist them. There were responses from five providers, and three had used the SDS approach. Providers were positive about SDS increasing flexibility and a focus on the outcome the person wants from support. They also recognised limitations such as the small number of providers offering the individual service fund option. The proposal was made by some providers that opportunities should continue for shared learning based on practice.

5.2 There were responses from four social care and health managers and twenty social workers/care managers. Managers were positive about the principles in the Act and felt it supported good practice such as a focus on the outcomes people want to achieve and community, creative solutions that move away from the traditional service led approach. A key challenge identified by managers was in trying to make the change when many processes and systems contradict this shift, for example a focus on timetables and tasks in the provision of support.

5.3 Of the twenty practitioners who responded most were positive about the potential of the Act and felt that it had enabled them to be more creative in their approach. The two main barriers to effective implementation were identified as:

a) Paperwork.
b) Budget pressures which led to a focus on personal care needs and task orientated support.

Other challenges included sufficient awareness of SDS amongst managers, and a lack of care staff available through providers and for direct payment users to recruit as personal assistants.

5.4 The council introduced a resource allocation system for SDS in 2007/8 with the national organisation 'in Control'. This provides an upfront estimate of funding for people in order to help them to plan their own support. Almost half of the practitioners commented that although it was empowering for people to have an estimated budget so that they could plan their support they were concerned about whether it is now an accurate enough tool to indicate the budget that would be available.

5.5 Providers, managers and practitioners all felt that further learning sessions, based on practice, would be helpful, and to continue to have access to information and support on SDS.

6 MEETING THE DUTIES OF THE ACT

6.1 There has been a steady increase in the number of people receiving their support through SDS and a 359% increase in numbers since the Act was introduced in April 2014 from 97 to 349 in August 2015. The information from people who have used SDS shows that the majority of people feel that the Council has met its key duties through the assessment and planning process. Most providers and the Council's social care and health staff who responded were positive about the impact of SDS but felt that there were key challenges to full implementation.

6.2 There is a local SDS Plan for 2014-18 and this will be updated to take account of this review.

Key actions to promote implementation have been identified and will inform the Plan:

a) Implement the new paperwork to reflect SDS. This will provide people with clear information about the option chosen, and on the budget for their support. It will also reduce paperwork for practitioners.
b) Collect information on whether people's outcomes are being met through their support and report on this.
c) Promote cultural change through the organisation by continuing to facilitate shared learning amongst stakeholders. This should improve understanding about SDS.
d) Meet our duty to provide information on a range of resources within service provision and the community by exploring the provision of a resource directory with providers and the third sector.
e) Consider how an outcomes approach can be integrated into budget allocation decisions. This should provide a robust system for allocating budget that takes into account how people want to meet their needs.
f) Review commissioned services in light of demand for more options.

7 IMPLICATIONS

7.1 **Financial**

The Scottish Government has made available £96,000 this year to support the implementation of the Act. This will fund project management; staff support to practitioners in adult and children's services with the duties of the Act and the inclusion of community resources within support planning; increased capacity within contracts to support providers with the change and with finance to develop and support information systems based on individual budgets; transition funding to support the move from block contracts; information to the public and a programme of training for staff and other stakeholders.

7.2 There is a review of the direct payment rate given regulation changes within HMRC and the Department of Work and Pensions that affect statutory sick pay, pensions and VAT. Block contract commissioning arrangements will also be reviewed in order to mitigate any effect of double funding when people exercise their right to choose alternative forms of support.

7.3 **Risk and Mitigations**

The report describes the risks that have been identified in relation to the Council's effective implementation of the Social Care (Self-directed Support) (Scotland) Act 2013. No additional specific concerns need to be addressed. This report provides evidence to key stakeholders on the Council's compliance with the Act and the continuous improvement actions that have been identified for implementation.

7.4 **Equalities**

A full equalities impact assessment was completed when the Act was implemented. It is anticipated there will be no adverse impact due to race, disability, gender, age, sexual orientation or religion/belief arising from the proposals contained in this report.

7.5 **Acting Sustainably**

It is anticipated that there will be no adverse economic, social or environmental effects from the proposals in this report.

7.6 **Carbon Management**

Self-directed support promotes community networking and resilience and should support carbon management by encouraging people to support, and be supported by, their communities.

7.7 **Rural Proofing**

This is not applicable as this report is not a new or amended policy or strategy.

7.8 **Changes to Scheme of Administration or Scheme of Delegation**

No changes are to be made to the Scheme of Administration or the Scheme of Delegation as a result of this report.

8 CONSULTATION

8.1 The Chief Financial Officer, the Monitoring Officer, the Chief Legal Officer, the Service Director Strategy and Policy, the Chief Officer Audit and Risk, the Chief Officer HR and the Clerk to the Council have been consulted and any comments received have been incorporated into the final report.

Approved by

Elaine Torrance **Signature .....**
Chief Social Work Officer

Author(s)

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Background Papers: 'One Year On from the Act. Summary: A review of Scottish Borders Council's progress in implementing the Social Care (Self-directed Support) (Scotland) Act 2013.' This document provides more detailed information on the review and is available through - http://intranet.scotborders.gov.uk/IntranetContent/One%20Year%20on%20from%20the%20Act%20Summary%20Aug%2015.docx

Previous Minute Reference: Scottish Borders Council 26 June 2013

Note – You can get this document on tape, in Braille, large print and various computer formats by contacting the address below. Susan Henderson can also give information on other language translations as well as providing additional copies.

Contact us at Susan Henderson, Council Headquarters. 01835 825080. sahenderson@scotborders.gcsx.gov.uk

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EASTER LANGLEE LANDFILL SITE – WAY FORWARD

Report by Service Director Neighbourhood Services

SCOTTISH BORDERS COUNCIL

27 August 2015

1 PURPOSE AND SUMMARY

1.1 **This report outlines the implications of the Council's decision to terminate the contract with New Earth Solution (NES) for the treatment of waste, on Easter Langlee Landfill Site and recommends the way forward.**

1.2 Under the NES Contract it was anticipated that the majority of the Council's Residual waste (i.e. black bin waste) would in future have been diverted from landfill via the Waste Treatment Facility planned for the Easter Langlee Site.

1.3 The termination of the NES contract means that residual waste will continue to be landfilled at current levels while an alternative solution is developed and as a result the currently operational landfill void is expected to reach capacity in the Summer/Winter of 2017.

1.4 In addition from January 2021, landfill sites in Scotland will no longer be able to accept biodegradable municipal waste without the material having met stringent pre-treatment processes.

1.5 In order to comply with these new requirements the Council will either have to treat its biodegradable municipal waste in the Borders prior to landfill, or it will need to transfer it out of the Borders for treatment.

1.6 The development of a Waste Treatment Facility in the Borders is not a viable option at the current time and an interim solution is required. The development of a permanent waste treatment facility will be considered and evaluated during the development of the new Waste Management Plan in consultation with the Member-Officer Reference Group.

1.7 A landfill options appraisal has now been undertaken to assess the options available to manage residual waste in the Borders and ensure compliance with the 2021 landfill bans.

1.8 Three options have been considered all of which involve the closure of the landfill site and development of a new Waste Transfer Station but at different points over the period 2017 to 2021.

1.9 The landfill options appraisal was undertaken in two parts:

- Non-Financial Analysis
- Financial Analysis

1.10 In summary the landfill options appraisal concludes that the Council should deliver 'Option A' as detailed below:

Close the landfill in Summer/Winter 2017 when current capacity has been reached. Construct a waste transfer station at Easter Langlee, on the old proposed NES site, in time for the transfer of waste from all regions onto alternative facilities from Summer/Winter 2017.

2 RECOMMENDATIONS

2.1 **I recommend that Council:-**

a) Supports and agrees the delivery of Option A as outlined in section 4.

b) Notes the capital and revenue costs associated with the delivery and ongoing cost of Option A as detailed in section 5 and agrees budgetary provision for these costs in the roll forward of the revenue and capital plan 2016/17.

3 Background

3.1 Easter Langlee Landfill Site is owned and operated by Scottish Borders Council. It is the only licensed landfill site in the Scottish Borders capable of accepting Non-Hazardous Waste.

3.2 The Council currently landfills approximately 40,000 tonnes per annum of household and commercial residual waste at Easter Langlee Landfill under its duties as a Waste Collection and Disposal Authority.

3.3 The Council also accepts approximately 3,000 tonnes per annum of waste at Easter Langlee Landfill directly from third party waste collectors that operate in the Borders area for which there is currently no alternative.

3.4 Under the NES Contract the majority of the Council's Residual waste (i.e. black bin waste) would have been diverted from landfill via a new Waste Treatment Facility. This would have significantly reduced the tonnage of waste accepted at the landfill (by approximately 80%) which in turn would have increased the life of the currently developed landfill void.

3.5 The termination of the NES contract means that the waste going to landfill will continue at current levels in the short-term. With current inputs to the landfill site remaining as they are, it is anticipated that the current landfill void will run out in the Summer/Winter of 2017.

3.6 In addition to the impact of the NES contract termination, the Waste (Scotland) Regulations 2012 set out changes to the waste types that landfills can accept in Scotland (see appendix 1). One of the significant changes is that from January 2021, landfill sites in Scotland will no longer be able to accept biodegradable municipal waste without the material having met stringent pre-treatment processes.

Note - The majority of the household and commercial residual waste which the Council manages is classed as biodegradable mixed municipal waste.

3.7 This means that from January 2021 the Council has two options:

Option 1 - Treat its biodegradable municipal waste in the Borders prior to landfill

Option 2 - Transfer its biodegradable municipal waste out of the Borders for treatment.

These options are considered below.

3.8 Option 1 - Waste Treatment in the Scottish Borders

3.8.1 The termination of the NES contract means that there are currently no waste treatment facilities in the Scottish Borders that are available or planned to come on stream which are capable of managing the Council's residual waste.

3.8.2 As a result if the Council wishes to treat residual waste in the Borders, a suitable treatment facility will need to be built locally.

3.8.3 Although the development of a Waste Treatment Facility in the Borders would minimise haulage costs it is not considered a viable option at the current time for the following reasons:

a) Until such time that the new Waste Management Plan (Appendix 2) has been developed and approved it is not possible to not know what kerbside collection services will be provided and therefore the size and type of waste treatment facility that may be required.
b) The development of a Waste Treatment Facility prior to the completion of the new Waste Management Plan is likely to significantly impact/restrict its outputs.
c) Given prior experience the timeframe available for designing, procuring and constructing a waste treatment facility, to ensure compliance with the landfill bans in January 2021, is considered to be high risk (i.e. too short) compared to that of a Waste Transfer Station.
d) The waste treatment opportunities available to Scottish Borders Council have changed considerably since the commencement of the Waste Treatment Project in 2008 and its subsequent award to New Earth Solutions. As a result the development of a Waste Treatment Facility in the Scottish Borders may no longer be the best or only way forward, for example:
    i. There are now a number of treatment facilities with capacity, that are either operational or in the process of being developed within reach of the Borders.
    ii. The gate fee for merchant treatment capacity is becoming increasingly competitive.
e) Waste policy, regulations and targets continue to evolve over time and this is likely to continue to be the case for the foreseeable future. Significant investment in a long term waste treatment facility/contract at the current time is likely to limit the Council's ability to be flexible and may expose the Council to further financial risk.

3.8.4 The development of a Waste Treatment Facility is therefore not recommended as a viable option at the current time. However this will be considered during the development of the new Waste Management Plan during which members will be consulted via the Member-Officer Reference Group.

3.8.5 A key consideration in the assessment of the alternative options has been to ensure that they do not preclude the potential of developing a Waste Treatment Facility in the Scottish Borders in the longer term.

3.9 Option 2 - Waste Treatment out with the Scottish Borders

3.9.1 For the Council to export waste to a treatment facility out with the Borders, an additional transfer facility will need to be built. This is because the existing transfer station at Easter Langlee is too small to accommodate the waste which is currently delivered directly to Easter Langlee landfill site.

Note – Appendix 3 details the Council's current residual waste bulking, haulage and disposal arrangements.

3.9.2 The treatment of waste out with the Scottish Borders, via a new waste transfer station in the Scottish Borders, is considered to present the best option at the current time for the following reasons:

a) The Waste Transfer Station can be designed and constructed so that it

can be adapted and altered to accommodate waste treatment in the future should this be an output of the new Waste Management Plan.

b) The Waste Transfer Station does not restrict the outputs of the new Waste Management Plan to the extent that a Waste Treatment Facility would.
c) It provides a flexible approach whilst also ensuring that the Council has the ability to comply with the requirements of the landfill bans.
d) It allows the market and waste policy to stabilise prior to the Council making any significant/binding long term investment decisions in relation to waste treatment.
e) The development of a Waste Transfer Station is significantly less complicated and costly than a Waste Treatment Facility.
f) The Waste Transfer Station can be designed, procured and built in time to meet the requirements of the landfill bans.
g) The waste treatment opportunities available to Scottish Borders Council have changed considerably since the commencement of the Waste Treatment Project in 2008 and its subsequent award to New Earth Solutions.
    a. There are now a number of treatment facilities with capacity, that are either operational or in the process of being developed within reach of the Borders.
    b. The gate fee for merchant treatment capacity is becoming increasingly competitive.

3.10 **In summary the Council cannot continue to landfill untreated biodegradable municipal waste at Easter Langlee Landfill Site beyond 1 January 2021. Consequently the Council must have an alternative in place by this point.**

4 Landfill Options Appraisal

4.1 A landfill options appraisal has been undertaken to assess the options available to manage residual waste in the Borders whilst complying with the 2021 landfill bans.

4.2 The inability of Easter Langlee Landfill Site to accept biodegradable waste without pre-treatment, from 2021, will significantly reduce the tonnage of waste it receives. This will affect the site's financial viability and consequently the future of Easter Langlee Landfill Site must be considered.

4.3 This is of particular importance at the current time as significant capital investment is required if the lifetime of the landfill is to be extended beyond summer/winter 2017.

4.4 Three options have been considered:

A. Close the landfill in Summer/Winter 2017 when current capacity has been reached. Construct a waste transfer station at Easter Langlee, on the old NES site, in time for the transfer of waste from all regions onto alternative facilities from Summer/Winter 2017.

B. Build a new landfill cell which will operate until 2021 at which point the landfill will have to close. Construct a waste transfer station at Easter Langlee, on the old NES Site. Then transfer waste from all regions onto alternative facilities from 2021.

C. Transfer waste from Tweeddale, Roxburghshire and Berwickshire to alternative facilities from mid-2015. Operate the landfill for Ettrick & Lauderdale's waste only until 2021. Construct a waste transfer station at Easter Langlee, on the old NES Site. Then transfer waste from all regions onto alternative facilities from 2021.

4.5 All of the options involve the closure of Easter Langlee Landfill Site and the development of a new Waste Transfer Station. The key difference between the options is the timing of when this takes place i.e. between 2017 and 2021.

4.6 In all options the Waste Transfer Station would be constructed at Easter Langlee and would be modular and adaptable. This would enable it to be expanded in the future, should it need to be, or adapted for alternative uses, such as a Waste Treatment Facility. Thus ensuring the outputs of the new Waste Management Plan can be accommodated.

4.7 In all options it is anticipated that bulky waste received at the CRC will need to be transported to alternative treatment facilities separately to kerbside collected residual waste. In order to do this, adjustments will be needed to either the existing transfer stations or community recycling centres. An estimation of the capital and revenue requirements to achieve this have been included in the financial modelling.

4.8 A review of the timelines to achieve each of the above options has been undertaken (see appendix 4 for details). The review demonstrates that an urgent decision needs to be taken. If a decision is delayed then there are two key risks:

1. That unnecessary additional revenue costs are incurred to haul waste out of the Borders for treatment in order to extend the lifetime of the existing landfill site,

2. There is less time to prepare for and comply with the requirements of the Waste (Scotland) Regulations 2012. In particular the landfill bans which come into effect in January 2021.

4.9 The options appraisal has been undertaken in two parts as detailed below:

1. Non-Financial Analysis
2. Financial Analysis

4.10 **Non-Financial Analysis**

4.10.1 The non-financial analysis involved identifying the Pros and Cons for each of the options and then assessing their importance, likelihood and impact to determine a resultant score (see appendix 5).

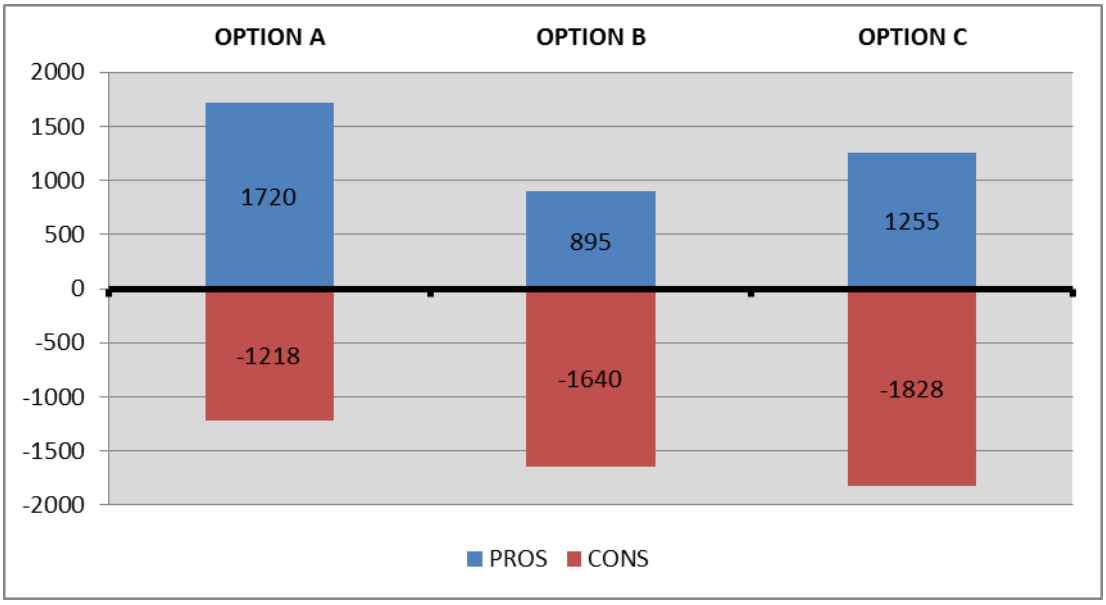
4.10.2 The Non-Financial Analysis was undertaken for the period 2015 through to 2025 (i.e. Zero Waste Plan target date limiting 5% of waste to landfill).

4.10.3 The analysis of the Pros and Cons importance, likelihood and impact has been formulated into a final Pros and Cons score and put into a bar chart to visually demonstrate the overall summary scores of the options (see Table 1 and Charts 1 & 2 below).

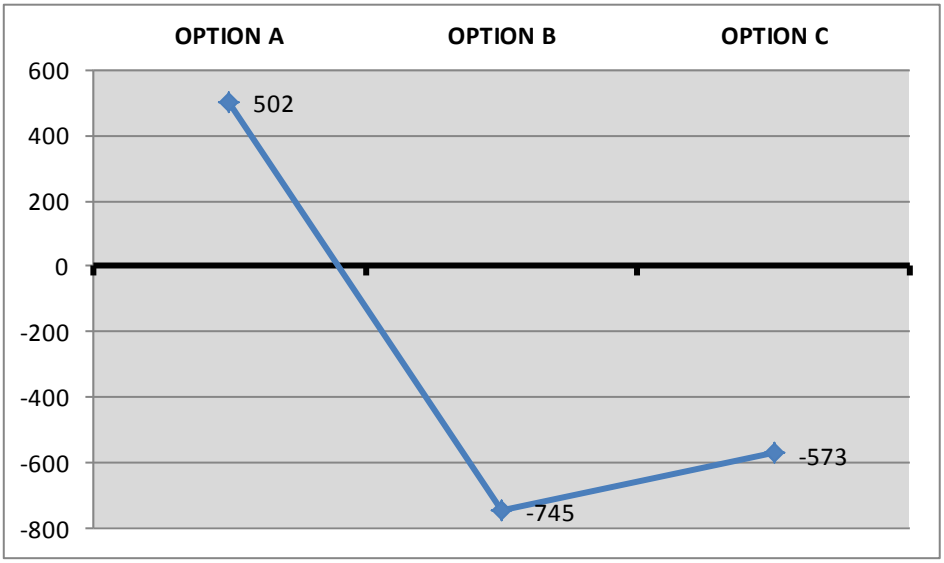
4.10.4 **Table 1 – Pros & Cons results**

Option	Pros Score	Cons Score	Resultant Score
A	1720	-1218	502
B	895	-1640	-745
C	1255	-1828	-573

4.10.5 **Chart 1 – Pros & Cons Scores**



4.10.6 **Chart 2 – Resultant Scores**



4.10.7 **Option A – Close the landfill and develop a Waste Transfer Station for 2017**

Option A has the highest resultant score of the three options (+502) which is as a result of having the greatest number of pros and least cons.

The early development of the Waste Transfer Station combined with the closure of Easter Langlee Landfill Site:

a) Improves the Council's ability to prepare and work towards achieving National and European recycling and landfill targets.
b) Increases the time available to prepare for the biodegradable landfill ban which will be introduced in 2021 via the Waste (Scotland) Regulations 2012.
c) Reduces the Council's exposure to environmental liabilities associated with the continued operation of the landfill both during operation and following closure.
d) Reduces the period during which the Council is likely to receive negative press and local community complaints associated with the operation of Easter Langlee landfill site.
e) Improves the Council's ability to access recyclate markets due to the additional storage space which will enable materials to be stock piled and bulk hauled.
f) Reduces the time to develop the new Waste Management Plan and determine long term requirements prior to developing a Waste Transfer Station.

4.10.8 **Option B – Develop Landfill Site**

Option B has the lowest resultant score of the three options (-745) which is a result of having the greatest number of cons and least pros.

The continued disposal of waste at Easter Langlee landfill until 2021 with the transfer of waste out of the Borders from 2021:

a) Restricts the Council's ability to prepare and work towards achieving National and European recycling and landfill targets.
b) Reduces the time to prepare for the biodegradable landfill ban which will be introduced in 2021 via the Waste (Scotland) Regulations 2021.
c) Increases the Council's exposure to environmental liabilities associated with landfill operations both during operation and following closure.
d) Increases the period during which the Council is likely to receive negative press and local community complaints associated with the operation of Easter Langlee landfill site.
e) Restricts the Council's ability to access recyclate markets due to a lack of storage space to stock pile and bulk haul materials.
f) Provides additional time to develop the new Waste Management Plan and determine long term requirements prior to developing a Waste Transfer Station.

4.10.9 **Option C – Extend the life of the Landfill Site by exporting waste**

Option C has the intermediate resultant score of the three options (-573).

The extended operation of current void at Easter Langlee landfill site by diverting waste to alternative treatment facilities along with the delayed development the Waste Transfer Station:

a) Improves the Council's ability to prepare and work towards achieving National and European recycling and landfill targets but not to the extent of option A.
b) Increases the time available to prepare for the biodegradable landfill ban which will be introduced in 2021 via the Waste (Scotland) Regulations 2021 but not to the extent of option A.
c) Reduces the Council's exposure to environmental liabilities associated with the continued operation of the landfill both during operation and following closure but not to the extent of option A.
d) Provides additional time to develop the new Waste Management Plan and determine long term requirements prior to developing a Waste Transfer Station.

4.11 **Financial Analysis**

4.11.1 The Financial Analysis was supported by SLR Consulting Ltd (Technical Support) and Nevin Associates Ltd (Financial Support).

4.11.2 A financial model for each of the three options was developed for the period 2015/16 to 2035/36 (i.e. 15 to16 years).

4.11.3 An assessment of the Risks and Optimism Bias associated with each of the options was then undertaken following the principles and methodology set out by HM Treasury in *The Green Book*.

4.11.4 Finally a sensitivity analyses was applied to each of the options. This tested

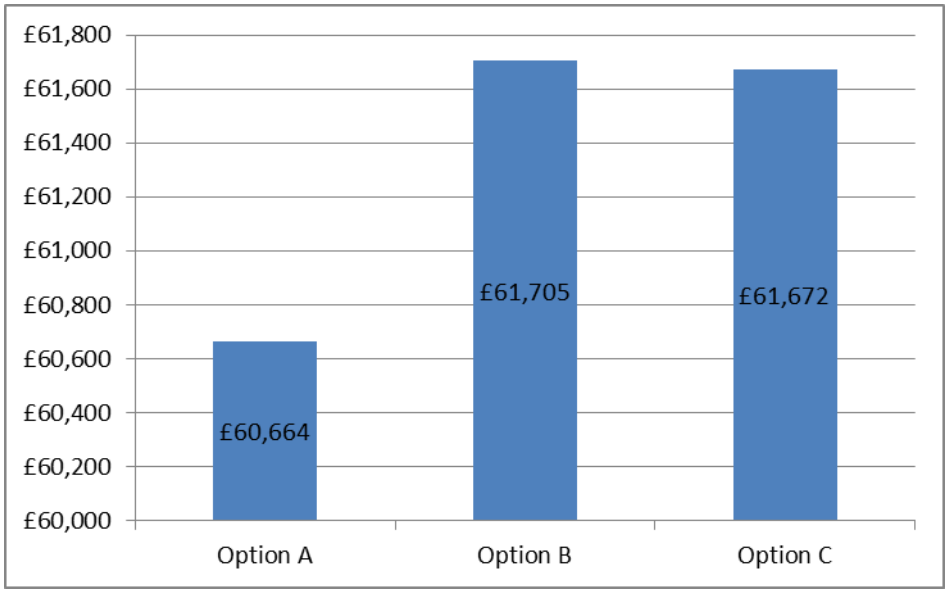
the options and compared them against multiple different future scenarios.

4.11.5 The results of the analysis identified Option A to be the least cost option on both constant cost and current cost basis, and after allowing for Risk and Optimism Bias.

4.11.6 The results for all options are within +/-5% i.e. within a margin of error.

4.11.7 Chart 3 below outlines the Net Present Cost (NPC) as a single figure in current cost terms with provision made for risk and Optimism Bias, and after taking account of third party income. This shows that Option A emerges as the most cost-effective option, although only by a relatively small amount in percentage terms.

4.11.8 **Chart 3 – 15 Year Cashflow discounted to Net Present Cost including 3rd party income, risk and optimism bias (£,000)**



4.11.9 In summary, Option A consistently emerges as the most cost effective option, and this holds for a range of plausible sensitivity scenarios, which suggests that it is robust. It is reinforced by the risk and Optimism Bias analysis, which indicates that option A is less exposed to Optimism Bias than either B or C, because it is implemented earlier, and so is less exposed to economic and stakeholder / regulatory /political uncertainties.

4.12 **Landfill Options Appraisal - Summary**

4.12.1 The key difference between the three options is the timing of when the transfer station is constructed and the landfill site closed.

4.12.2 The financial analysis confirms Option A to be the least cost option although all options are within a 5% margin of error.

4.12.3 The non-financial analysis clearly demonstrates Option A to have the greatest number of pros and fewest cons.

4.12.4 Overall it is recommended that Option A is delivered as this represents the best option.

5 IMPLICATIONS

5.1 Financial

(a) The review demonstrates that an urgent decision needs to be taken. If a decision is delayed then there are two key risks:

1. That additional revenue costs are incurred to haul waste out of the Borders for treatment in order to extend the lifetime of the existing landfill site,

2. There is less time to prepare for and comply with the requirements of the Waste (Scotland) Regulations 2012. In particular the landfill bans which come into effect in January 2021.

(b) **Capital Implications**

The impact of delivering option A on the Council's Waste Disposal capital plan:

i Table 2 – Current Budget

Current Budget	2015/16 £000's	2016/17 £000's	2017/18 £000's	2018 to 2025 £000's	Total £000's
Easter Langlee Cell Provision	386	820	100	300	1,606
Waste Treatment Facility		714			714
Total	**386**	**1,534**	**100**	**300**	**2,320**

ii Table 3 – Option A

Option A	2015/16 £000's	2016/17 £000's	2017/18 £000's	2018 to 2025 £000's	Total £000's
Easter Langlee Cells	386	205	215	273	1,079
Waste Transfer Facility	121	635	4,778	9	5,543
CRC Bulky Waste Adjustments				267	267
Total	**507**	**840**	**4,993**	**549**	**6,889**

iii Table 4 – Variance between Current budget and Option A

Variance	2015/16 £000's	2016/17 £000's	2017/18 £000's	2018 to 2025 £000's	Total £000's
Increase/ (Decrease)	**121**	**(694)**	**4,893**	**249**	**4,569**

iv The estimates for option A include allowance for risk, optimism bias and inflation. The impact of option A is an additional capital requirement of £4.569m which will require increased borrowing. The impact of the additional borrowing will be fully funded from the departments revenue budget as per para 5.1 (c).

v Whilst there is a significant increase in the capital required, it has always been the intention that the capital and revenue implications of future waste service activities would be met through the department's existing baseline revenue budget. Although the mix between revenue and capital is now changing, the funding of the recommended option will still be met from the overall agreed revenue budget.

(c) **Revenue Implications**

Assuming the recommended option is approved the following financial implications are anticipated.

i Based on projected revenue budgets reflected in the current 5 year plan for Waste Services in 2016/17-2019/20, as shown in chart 4, current modelling indicates that the financial consequences of the introduction of the proposed waste transfer station can be accommodated within planned resources. The annual costs of the capital investment required to deliver the transfer station are also affordable within the future budget previously identified to support the NES contract. Future revenue cost and budget projections are shown in table 5 below and in chart 4.

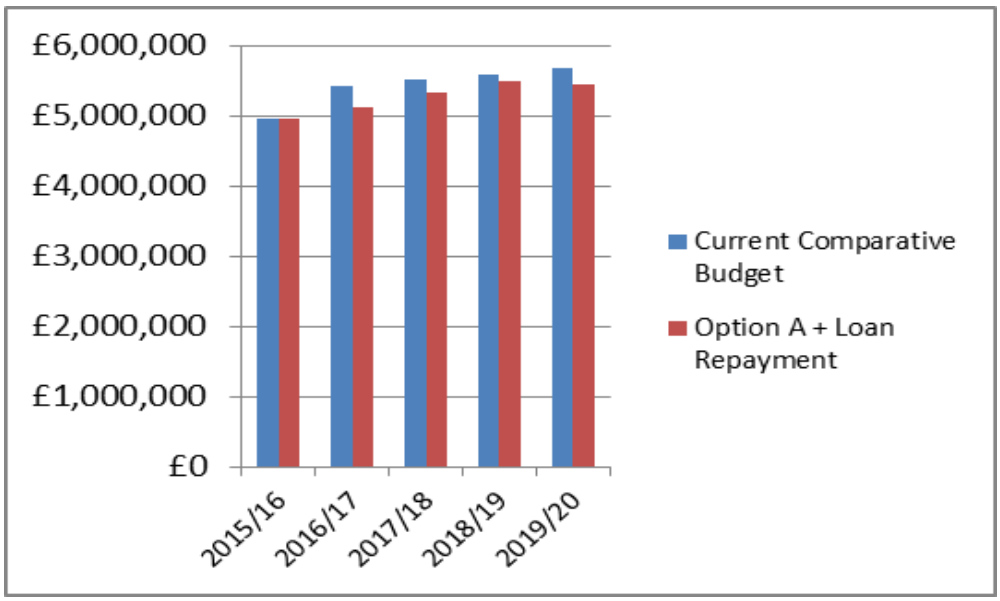
ii Current modelling indicates that there may be the potential for savings to be realised in future years once the waste transfer station is open, these savings will be incorporated within future financial planning processes once verified.

iii Modelling assumptions have been based on best information within the market at this time; any changes to these assumptions will be closely monitored as the project progresses.

iv **Table 5 – Revenue Budget Implications**

Revenue	**2015/ 16 £,000**	**2016/ 17 £,000**	**2017/ 18 £,000**	**2018/ 19 £,000**	**2019/ 20 £,000**
Current Comparative Budget	4,968	5,416	5,507	5,595	5,679
Option A + Loan Repayment	4,968	5,111	5,336	5,488	5,440
Saving / (Deficit)	**0**	**304**	**170**	**107**	**238**

v **Chart 4 –Revenue Budget Implications**



Note – For the purposes of determining the revenue implications Option A does not include the optimism bias or risk adjustment included in the financial analysis (see section 4.11). Inflationary rises have been applied to Option A in line with those currently adopted by the Council.

5.2 Risk and Mitigations

5.2.1 A risk review has been completed, see appendix 6.

5.2.2 The review considers the risks of the project (Option A) and the mitigations. Some of the key impacts and their mitigations are outlined below:

No	Risk	Mitigation
1	Delay to Waste Transfer Station delivery programme. For example delay to: • Planning application • Licencing/Permit application • Construction Programme	• The NES facility achieved planning permission and permitting for a waste treatment facility on the same site. Therefore a precedent has been set. • Communications strategy to be developed with consideration of key stakeholder's. • Project management team to be developed to oversee and monitor the delivery of the project. • If there are delays to the Waste Transfer Station delivery programme the landfill void can be extended by transferring waste out with the Borders. There would be a cost associated with this but it would help ensure continuity of service delivery.
3	Risk the Council misses the ban on Biodegradable Municipal Waste (BMW) to landfill from 2021.	• The development of the Waste Transfer Station improves the Council's ability

		to achieve the BMW landfill ban as it allows waste to be bulk hauled to alternative waste treatment facilities. • The development of the Waste Transfer Station for a commencement date in 2017 provides more time to achieve the BMW landfill bans than options B and C. • Robust residual waste treatment contracts to be developed including contingency arrangements where possible.
6	Option A restricts the outputs of the new Waste Management Plan which may include the development of a Waste Treatment Facility in the Scottish Borders.	• The Waste Transfer Station will be constructed at Easter Langlee and will be modular and adaptable. This will enable it to be expanded in the future, should it need to be, or adapted for alternative uses, such as a Waste Treatment Facility. • The Council does not need to agree long term contracts in the immediate future. It is proposed that short to medium term waste treatment contracts are arranged to ensure flexibility in the future depending on the output of the new Waste Management Plan.
9	Waste Treatment is more expensive than anticipated. For example: • Gate fee higher than anticipated • Increased exposure to market fluctuations • Increased exposure to haulage cost fluctuations i.e. fuel price.	• In comparing options A, B and C the financial modelling included an analysis of risk and optimism bias. • The Waste Treatment costs are based on market knowledge, Scotland Excel prices and advice from external consultants. • Development of robust Waste Treatment Contracts with support from Council's procurement department and legal services. • Robust contract monitoring and management. It is worth noting that under all options further treatment is required therefore this risk if it does occur will be for an additional 3 years in option A compared to the other options.

5.3 **Equalities**

5.3.1 An initial impact assessment has been completed (see Appendix 7). At this stage it is anticipated to have a positive impact on meeting the Equality Duty. Further assessment will be conducted through implementation to ensure this is achieved.

5.4 **Acting Sustainably**

5.4.1 An initial impact assessment has been completed, see appendix 8.

5.4.2 The assessment considers the impacts of the project (Option A) on Economic Growth, Social Cohesion and Protection of the Environment. Some of the key impacts are outlined below.

(a) **Economic Growth**

- Helps safeguard existing jobs
- Helps ensure third party waste collectors are able to dispose of their waste following the closure of the landfill.
- Helps ensure waste produced in the Scottish Borders can be sustainably managed.

(b) **Social Cohesion**

- Helps improve the local community's quality of life through the closure of the landfill site.
- Reduces the potential of odour issues related to the operation of landfill sites.

(b) **Protection of the Environment**

- Helps reduce the environmental impacts associated with the operation of a landfill site.
- Helps to minimise the tonnage of waste landfilled.
- Helps maximise the tonnage of waste sent for recycling and or re-use.
- Helps enhance semi-natural habitats through the closure of the landfill and subsequent restoration of the site.

5.4.3 At this stage it is considered unlikely that a full Strategic Environmental Assessment will be required. A Pre-screening and if necessary a Screening exercise will be undertaken to clarify the requirements and to ensure compliance with the Environmental Assessment (Scotland) Act 2005.

5.5 **Carbon Management**

5.5.1 The closure and subsequent restoration of Easter Langlee Landfill Site will significantly reduce the volume of methane gas emitted from the landfill site. This will reduce the Council's carbon emissions and will maximise the generation of green electricity from the landfill site.

5.5.2 There will be carbon emissions from the alternative treatment technologies used to manage the Council's waste. However these are likely to be significantly less than those associated with disposal of landfill as is currently the case.

5.5.3 The haulage of waste to facilities out with the Council's boundary will increase the Councils carbon footprint associated with vehicle movements. However the majority of the waste will be bulk hauled which will ensure vehicle movements are kept to a minimum.

5.6 **Rural Proofing**

5.6.1 It is anticipated there will be no adverse impact on the rural area from the proposals contained in this report.

5.7 **Changes to Scheme of Administration or Scheme of Delegation**

5.7.1 No changes are required to either the Scheme of Administration or the Scheme of Delegation.

6 CONSULTATION

6.1 The Chief Financial Officer, the Monitoring Officer, the Chief Legal Officer, the Service Director Strategy and Policy, the Chief Officer Audit and Risk, the Chief Officer HR and the Clerk to the Council have been consulted and any comments received have been incorporated into the final report.

6.2 Others that have been consulted are listed below:

- Corporate Equalities and Diversity Officer.
- Corporate Transformation and Services Director.
- Procurement Officer.
- Corporate Communications.

Approved by

Service Director Neighbourhood Services Signature .....

Author(s)

Name	Designation and Contact Number
Ross Sharp-Dent	Waste Manager +8857
Maggie Cripps	Waste Treatment Officer +5114
Suzanne Douglas	Financial Services Manager +5881
Kirsty Robb	Capital and Investments Manager +5249

Background Papers: Waste Management Plan - Scottish Borders Council 25 June – item 10
Previous Minute Reference: None

Note – You can get this document on tape, in Braille, large print and various computer formats by contacting the address below. Jacqueline Whitelaw can also give information on other language translations as well as providing additional copies.

Contact us at Jacqueline Whitelaw, Place, Scottish Borders Council, Council Headquarters, Newtown St Boswells, Melrose, TD6 0SA, Tel 01835 825431, Fax 01835 825071, email eitranslationrequest@scotborders.gov.uk.

Appendix 1 – Waste (Scotland) Regulations 2012

The Zero Waste Plan outlined that a package of regulatory measures would be required in order to implement a number of its actions. This culminated in the introduction of The Waste (Scotland) Regulations 2012 which came into force on the 17th May 2012.

The Regulations provide for the collection, transport and treatment of key recyclable materials (paper, card, plastic, metal and glass) and food waste, placing additional requirements on local authorities and businesses in this regard.

Specific measures introduced by the Waste (Scotland) Regulations 2012 include:

- A requirement on local authorities to provide householders with:
    - A separate collection service for dry recyclables (paper, card, plastic metal and glass) from January 2014.
    - A separate collection service for food waste (apart from rural areas) from January 2016.

- A requirement on Local Authorities to take steps from 1st January 2014 to promote separate collection and recycling. This includes making arrangements for the provision of a food waste receptacle.

- A requirement for businesses to present:
    - Dry recyclables (metals, plastic, paper, card and glass) separately for collection from 1st January 2014
    - Food waste of more than 50kg/week separately for collection from 1st January 2014, with those producing less than 50kg/week exempt until the end of 2015.

- A ban on materials collected separately for recycling going to landfill or incineration from 1st January 2014.

- A requirement to remove dry recyclables (plastics and metals) from mixed waste prior to incineration (from July 2012).

- **A ban on biodegradable municipal waste going to landfill from 1st January 2021**

- A ban on the use of macerators and food waste disposal units from 1st January 2016 to ensure food waste is not deposited in a public drain or sewer. This does not apply to domestic properties or rural areas.

Appendix 2 – New Waste Management Plan – Development Approach

The Council's approach to the development of the new Waste Management Plan was approved by Council on 25th June 2015.

It was agreed that in order to ensure that the new Waste Management Plan delivers a value for money service, fit for purpose, flexible solution the following service elements are to be considered:

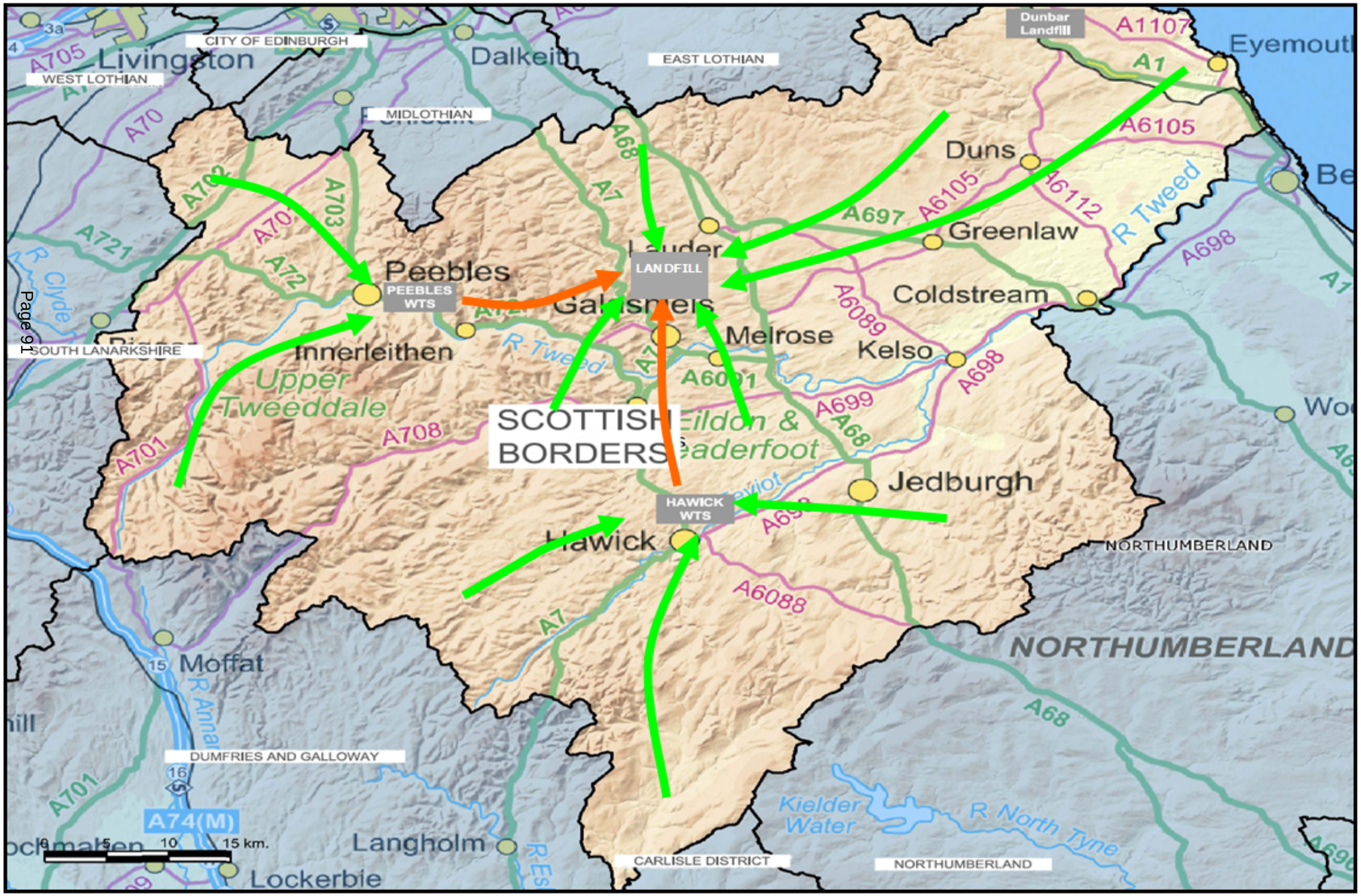
a) Kerbside Collection
b) Transfer and Bulk Haulage
c) Waste Treatment
d) Waste Disposal

All elements of these will influence the analysis of the different options and the outcome of the new Waste Management Plan.

Research recently undertake by Officers indicates that:

- The waste treatment opportunities available to Scottish Borders Council have changed considerably since the commencement of the Waste Treatment Project in 2008 and its subsequent award to New Earth Solutions.
- There are now a number of treatment facilities with capacity, that are either operational or in the process of being developed within reach of the Borders.
- The gate fee for merchant treatment capacity is becoming increasingly competitive compared to landfill.
- Waste policy, regulations and targets continue to evolve over time and this is likely to continue to be the case for the foreseeable future.
- There may be merit in allowing the market and waste policy to stabilise prior to the Council making any significant long term investment in waste treatment contracts.

Appendix 3 – SBC's current bulking, haulage and disposal arrangement for residual waste

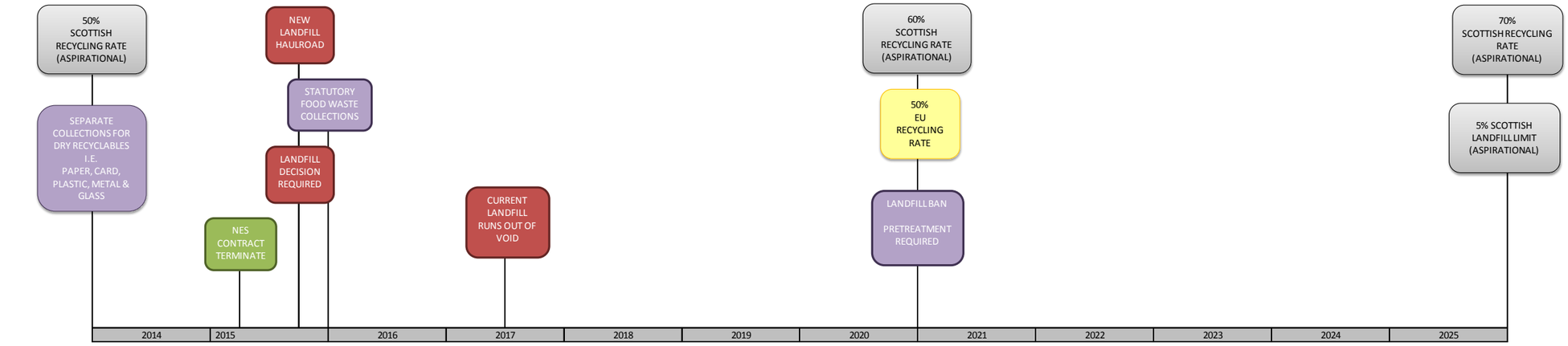


Key

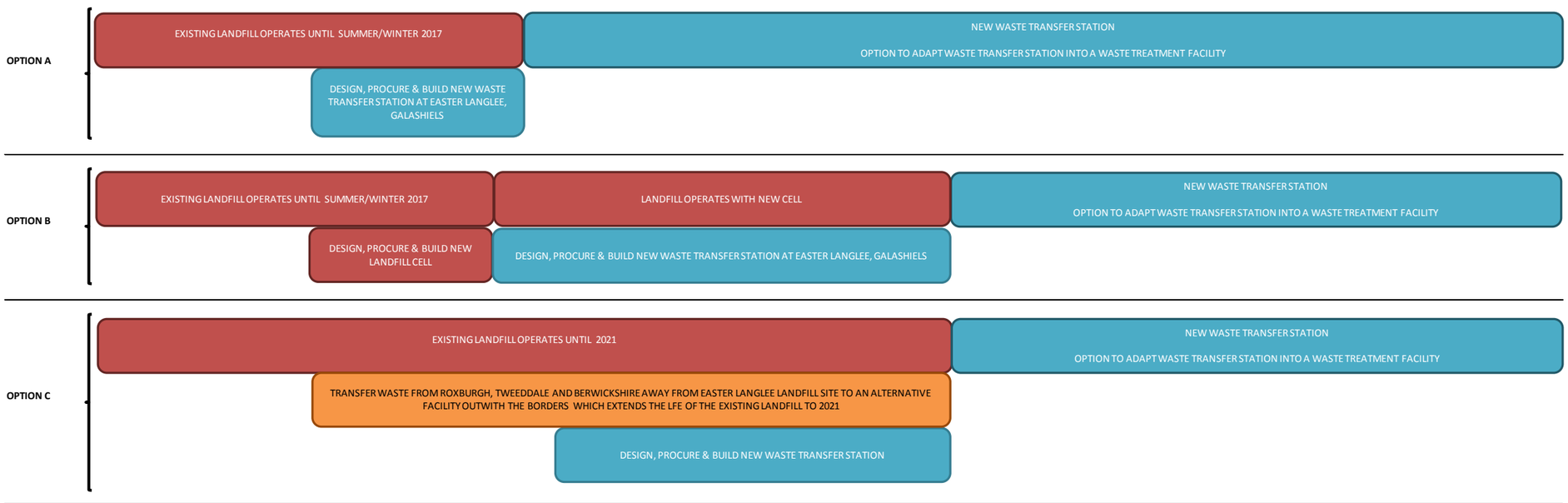
Residual Waste - Bulk Haulage
Residual Waste – Refuse Collection Vehicle Deliveries

Scottish Borders Council – 27 August 2015

Appendix 4 – Landfill Options - Delivery Timeline



LANDFILL OPTIONS



KEY

- LANDFILL
- WASTE TRANSFER STATION
- TREATMENT OF RESIDUAL WASTE OUTWITH THE BORDERS TO EXTEND LIFE OF EXISTING LANDFILL
- SCOTTISH GOVERNMENT ASPIRATIONAL TARGETS
- STATUTORY REQUIREMENTS OF THE WASTE (SCOTLAND) REGULATIONS 2012
- EU MEMBER STATE RECYCLING RATE
- NES CONTRACT TERMINATION DATE

OPTION A

Close the landfill when it fills its current capacity. Construct a waste transfer station at Easter Langlee, on the old NES site, which can transfer waste onto alternative facilities from Summer/Winter 2017. Transfer all waste to alternative facilities from all regions from Summer/Winter 2017.

OPTION B

Build a new landfill cell which will operate until 2021 at which point the landfill will close. Construct a waste transfer station at Easter Langlee, on the old NES Site, which can transfer waste onto alternative facilities from 2021. Transfer all waste to alternative facilities from all regions from 2021.

OPTION C

Transfer waste from Tweeddale, Roxburghshire and Berwickshire to alternative facilities from mid-2015. Operate the landfill for Ettrick & Lauderdale's waste until 2021. Construct a waste transfer station at Easter Langlee, on the old NES Site, which can transfer waste onto alternative facilities from 2021. Transfer all waste to alternative facilities from all regions from 2021.

Appendix 5 – Non-Financial Analysis Methodology

The pros and cons for each option were analysed in terms of Likelihood, Impact, and Importance under the following key headings:

- Achievement of national targets
- Cost of waste disposal
- Efficiency of operation
- Public/third party opinion
- Service Resilience

Under each of the above headings were sub headings.

Scores were applied to each year between 2015 (now) and 2025 (i.e. the target year for the national target of 5% to landfill).

The scores in the table 1 and charts 1 & 2 are a summary of the above for each option.

Appendix 6 – Risks and Mitigations

No	Risk	Mitigation
1	Delay to Waste Transfer Station delivery programme. For example delay to: • Planning application • Licencing/Permit application • Construction Programme	• The NES facility achieved planning permission and permitting for a waste treatment facility on the same site. Therefore a precedent has been set. • Communications strategy to be developed with consideration of key stakeholder's. • Project management team to be developed to oversee and monitor the delivery of the project. • If there are delays to the Waste Transfer Station delivery programme the landfill void can be extended by transferring waste out with the Borders. There would be a cost associated with this but it would help ensure continuity of service delivery.
2	Opposition from Local Residents	• The NES facility achieved planning permission and permitting for a waste treatment facility on the same site. Therefore a precedent has been set. • The closure, restoration and aftercare of the landfill and replacement with a Waste Transfer Station: o reduces the potential for odour release associated with landfill operations o reduces bird numbers associated with the landfill o improves the visual amenity of the local area • Communications strategy to be developed with consideration of key stakeholder's.
3	Risk the Council misses the ban on Biodegradable Municipal Waste (BMW) to landfill from 2021.	• The development of the Waste Transfer Station improves the Council's ability to achieve the BMW landfill ban as it allows waste to be bulk hauled to alternative waste treatment facilities. • The development of the Waste Transfer Station for a commencement date in 2017 provides more time to achieve the BMW landfill bans than options B and C. • Robust residual waste treatment contracts to be developed including contingency arrangements where possible.
4	Risk the Council will miss aspirational recycling and diversion targets outlined in the Zero Waste Plan.	• The longer the Council operates a landfill site the less likely the Council is to achieve the Zero Waste Plan's aspirational recycling and diversion targets. • The closure of the landfill site and development of a new Waste Transfer Station improves the Council's ability to divert residual waste from landfill and increase recycling rates. • The delivery of the Waste Transfer Station increases the options available to the Council to divert residual waste from landfill and increase recycling rates. • The requirements of the Zero Waste Plan are to be considered during the development of new Waste Management Plan.
5	Risk of National and European Policy/Legislation change	• The development of a Waste Transfer Station provides the Council with additional flexibility, compared to landfill, to comply with changes to National and European Waste Policies. • Maintain up to date industry knowledge/intelligence through, industry contacts, Local Authority contacts, COSLA, CIWM, APSE, websites and industry journals.
6	Option A restricts the outputs of the new	• The Waste Transfer Station will be constructed at Easter Langlee and will be modular and adaptable. This will

	Waste Management Plan which may include the development of a Waste Treatment Facility in the Scottish Borders.	enable it to be expanded in the future, should it need to be, or adapted for alternative uses, such as a Waste Treatment Facility. • The Council does not need to agree long term contracts in the immediate future. It is proposed that short to medium term waste treatment contracts are arranged to ensure flexibility in the future depending on the output of the new Waste Management Plan.
7	Waste Transfer Station is more expensive than anticipated.	• The financial modelling includes an analysis of risk and optimism bias in relation to the Waste Transfer Station. • The financial modelling includes a contingency fund. • It is worth noting that in all options a Waste Transfer Station is required therefore this risk, if it does occur, will be the same for all options but it will 3 years later. • Development of a detailed design. • Robust project management.
8	Waste Transfer Station more expensive to operate than anticipated.	• In comparing options A, B and C the financial modelling included an analysis of risk and optimism bias. • The cost of operating the Waste Transfer Station is based on a combination of the Council's in house knowledge of running Waste Transfer Stations and external consultancy advice. • It is worth noting that in all options a Waste Transfer Station is required therefore this risk, if it does occur, will be the same for all options but it will 3 years later in option B and C.
9	Waste Treatment is more expensive than anticipated. For example: • Gate fee higher than anticipated • Increased exposure to market fluctuations • Increased exposure to haulage cost fluctuations i.e. fuel price.	• In comparing options A, B and C the financial modelling included an analysis of risk and optimism bias. • The Waste Treatment costs are based on market knowledge, Scotland Excel prices and advice from external consultants. • Development of robust Waste Treatment Contracts with support from Council's procurement department and legal services. • Robust contract monitoring and management. • It is worth noting that under all options further treatment is required therefore this risk if it does occur will be for an additional 3 years in option A compared to the other options.
10	The current Waste Transfer Station will need to be repurposed.	• When the new Waste Transfer Station is constructed it will no longer be required for its current use. • The old Waste Transfer Station could be repurposed as follows: o Potential expansion of the Community Recycling Centre o Potential to develop into a Re-Use site for furniture, bikes etc. o Contingency Waste Transfer Station should any of the Council's other facilities be out of action.

Appendix 7 – Stage 1 Equality Impact Assessment – Start Up

Scottish Borders Council

Stage 1 Equality Impact Assessment – Start Up

(For Early Proposals, Project Initiation, Start Up)

1.	**Title of Proposal:**	Landfill Options Appraisal

(*Please enter the title or reference for your proposal)*

2.	**Service Area:**	Waste Services
	Department:	Neighbourhood Services

(Please enter the department/service area submitting the proposal)

3.	**Description:**	To determine the implications of the Council's decision to terminate the Waste Treatment Contract on Easter Langlee Landfill Site and the recommended way forward. Preferred option: Option A- Close the landfill in Summer/Winter 2017 when current capacity has been reached. Construct a waste transfer station at Easter Langlee, on the old NES site, in time for the transfer of waste from all regions onto alternative facilities from Summer/Winter 2017.

(Please enter a full description of your proposal including its aims and objectives)

4.	**Relevance to the Equality Duty.** **Do you believe your proposal has any relevance to the following duties of the Council under the Equality Act 2010?** (If you believe that your proposal may have some relevance – however small please indicate yes)	
	Duty	**Yes/No**
	Elimination of discrimination (both direct & indirect), victimisation and harassment. *(Could your proposal discriminate? Or help eliminate discrimination?)*	Yes
	Promotion of equality of opportunity? *(Could your proposal help or hinder the Council with this)*	Yes
	Foster good relations? *(Could your proposal help or hinder the council s relationships with those who have equality characteristics?)*	Yes

5.	**Which groups of people may be impacted (both positively and negatively) if the proposal is advanced?** (Please x all that apply).		
	Equality Characteristic	**Impact**	**Description**

	No Impact	Possible Positive Impact	Possible Negative Impact	*Where you have identified a potential impact, please detail what you perceive this to be.* *Where an equality characteristic is potentially negatively affected, please explain how and the extent to which they may be negatively affected.* ***If you are unsure of the answer please state this and recommend further investigation****.*
Age (Older or younger people or a specific age grouping)	x			
Disability e.g. Effects on people with mental, physical, sensory impairment, learning disability, visible/invisible, progressive or recurring		x		The closure of the landfill and replacement with a Waste Transfer Station has the potential to make it easier for all disability groups to access and egress the site as it does not require vehicles to be driven onto uneven ground (i.e. the landfill).
Gender (Males, Females, Transgender or Transsexual people)	x			
Race Groups: including colour, nationality, ethnic origins, including minorities (e.g. gypsy travellers, refugees, migrants	x			

	and asylum seekers)				
	People with Religious or other Beliefs: different beliefs, customs (including atheists and those with no aligned belief)	x			
	Sexual Orientation, e.g. Lesbian, Gay, Bisexual, Heterosexual	x			
	Carers (those who have caring responsibilities for someone with an equality Characteristic)	x			
	Poverty (people who are on a low income including benefits claimants, people experiencing fuel poverty, isolated rural communities etc)		x		The long term future of the landfill site is uncertain due to a ban on biodegradable municipal waste to landfill from 2021 in accordance with the Waste (Scotland) Regulations 2012. The development of a new waste transfer station provides alternative waste disposal facilities in the Scottish Borders. This likely to be beneficial not only to the Council in discharging it statutory duties but also to third party waste collectors that operate in the Borders area. The development of a waste transfer station may enable the Council to minimise disposal and haulage costs for third party waste collectors which in turn may help minimise the cost of disposal for waste producers including those in the Poverty Equality Characteristic.

	Employees (those employed by the Council including full time, part time and temporary)		x	x	The long term future of the landfill site is not certain due to a ban on biodegradable municipal waste to landfill from 2021 in accordance with the Waste (Scotland) Regulations 2012. The development of a new waste transfer station will provide employment opportunities, with the priority given to those staff currently employed on the landfill site. Staff will be retained or redeployed wherever possible. However, there is a risk that those staff employed at the landfill site will be at risk for future employment if suitable alternative work cannot be found.

6.	**Mitigation**	
	Where you have identified a potential negative impact, please detail what mitigations will need to be put in place in order for your proposal to progress. **If you are unsure of the answer please state this and recommend further investigation**.	
	Characteristic	**Mitigation**
	Employees	**Where possible redeploy staff into new roles across waste services including the new Waste Transfer Station offering training and support where necessary. If not possible to find work within Waste Transfer Station, then look at redeployment elsewhere in the council, offering training and support where necessary.**

7.	**How certain are you of the answers you have given?**

	Answer	**Tick One**
	Certain - I have populated the evidence base to support my answers.	
	Fairly Certain – but don't have concrete evidence to support my answers so would recommend further assessment is conducted if the proposal is progressed.	**x**
	Not Certain – further assessment is recommended if proposal is progressed.	

Completed By			
Name	Ross Sharp-Dent	Service Area.	Waste Services
Post	Waste Manager	Date	21st July 2015

This assessment should be presented to those making a decision about the progression of your proposal.

If it is agreed that your proposal will progress, you must send an electronic copy to corporate communications to publish on the webpage within 3 weeks of the decision.

For your records, please keep a copy of this Equality Impact Assessment form.

Appendix 8 – Sustainable Development Checklist

Report Title: Landfill Options Appraisal				
Author/Responsible Officer: Ross Sharp-Dent				
Does the project or activity:				
		Yes	**No**	**N/A**
1	**Economy and Work**			
	Create new jobs or safeguard existing employment	x		
	Benefit small and/or locally-based business	x		
	Increase employment/vocational training opportunities		x	
	Link local production with local consumption	x		
	Improve local business environmental awareness	x		
2	**Community and Participation**			
	Involve the community in developing and implementing the project		x	
	Take into account under-represented or excluded groups		x	
	Take into account equal opportunities	x		
	Encourage volunteering		x	
	Improve community facilities		x	
	Improve community quality of life	x		
	Improve community capacity		x	
	Encourage local action and decision making		x	
3	**Transport**			
	Encourage walking or cycling		x	
	Encourage use of public/community transport		x	
	Improve access to facilities for those without a car		x	
	Reduce travel requirements or encourage mode shift to more sustainable forms of transport		x	
4	**Pollution**			
	Reduce/ prevent pollution, e.g. noise, air, water, land	x		
	Reverse negative impacts of pollution, e.g. restore polluted environments		x	
5	**Energy**			
	Maximise energy efficiency			x
	Generate energy from waste or renewable resources	x		
	Contribution to carbon reduction targets			x
		Yes	No	N/A
6	**Waste and Resources**			
	Reduce waste and/or maximise resource use	x		
	Encourage re-use and/or repair	x		
	Encourage recycling and/or use of recycled materials	x		
	Does a 'whole life costing' assessment support the favoured option		x	

7	**Buildings and Land Use**			
	Provide or improve local amenities		x	
	Re-use/conserve buildings		x	
	Improve disabled access	x		
8	**Wildlife and Green/ Open Spaces**			
	Encourage use of green/open spaces for community benefit		x	
	Increase public access to green/open space		x	
	Improve access to green space where it is currently most limited		x	
	Encourage environmentally sensitive / sustainable land use and/ or land management	x		
	Increase or enhance semi-natural habitats	x		
	Increase biodiversity	x		
	Is a Strategic Environmental Assessment required under the EU SEA Directive	TBC	TBC	TBC
9	**Integration**			
	Seek to combine social, economic and environmental issues into integrated solutions	x		
	Seek to use and nurture local talent and resources where possible	x		

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