

PERTH AND KINROSS COUNCIL

Environment and Infrastructure Committee

18 August 2021

FLOODING IN PERTH & KINROSS OF 11/12 AUGUST 2020

Report by Head of Environmental & Consumer Services
(Report No. 21/122)

PURPOSE OF REPORT

This report describes the extent of the severe flooding which occurred in Perth and Kinross on 11 and 12 August 2020. It also includes the findings of the review of the Council's response to the flooding and actions taken in response to the emergency motion approved by Committee on 19 August 2020. The report makes recommendations for short, medium and long term actions.

1. BACKGROUND / MAIN ISSUES

Introduction

- 1.1 During the night of 11/12 August 2020, much of Scotland experienced heavy rainfall and thunderstorms resulting in flooding across a widespread area of Central and North East Scotland.
- 1.2 The entire Perth and Kinross Council area suffered extensive rainfall (for approximately 6 hours) from around 11pm on 11 August 2020 into the early hours of the following morning. The storm was significant and particularly affected parts of Perth City, Alyth, Dunning, Forgandenny, Kinross, Pitlochry, Blairgowrie, Methven and other areas.
- 1.3 It is understood that in total approximately 225 properties in Perth & Kinross experienced some form of internal flooding with many more being affected externally.
- 1.4 To illustrate the severity of the event, the Met Office confirmed that, in Perth, the majority of the rain fell between midnight and 3am, with 43.4mm falling between 1am and 2am. The total rainfall in Perth during the 24 hour period from 6am on 11 August was 86.4mm. This compares to an expected normal level of rain in the whole month of August of 88.8mm.
- 1.5 SEPA published a report on the flood in December 2020 which can be viewed at: www.sepa.org.uk/media/536333/the-flash-floods-of-11-and-12-august-2020.pdf. The report confirms that the maximum hourly rainfall accumulations for Perth are typically expected to have a return period of 1 in 150 years, and the longer duration rainfall accumulations are expected to have a return period in the range of 1 in 75 years (3 hours) and 1 in 250 years (12 hours).

- 1.6 On 19 August 2020, the Environment and Infrastructure Committee approved an emergency motion requesting officers to:
- i. review the existing flood schemes and local flood risk management plans to determine what further interim arrangements may need to be put in place to manage flood risk before the proposed schemes are completed; and
 - ii. review where there are additions required to the list of local flood schemes included in the national flood risk management plan and any additions required to the lists of actions in local flood risk management plans; and
 - iii. after hearing feedback from the local community about their experiences and opinions on how to avert or mitigate future flooding, identify short, medium and long-term actions for the communities that have been affected and Alyth in particular; and
 - iv. report back as early as possible with the outcome of these reviews detailing the identified actions for Alyth and other areas to a future meeting of this Committee; and
 - v. review the Out of Hours Emergency Service as a matter of urgency; and
 - vi. include other weather events in future Policy and Level of Service for Winter reports.
- 1.7 A review of the Council's response to the flood event was initiated to gain a full understanding of its extent and determine whether the impact on residents and businesses could have been reduced. The review aimed to identify any lessons that could be learned from the way in which the Council responded to the event to improve future practice.

Points i and ii of the Motion: The Second Cycle of Flood Risk Management Plans

- 1.8 The Flood Risk Management (Scotland) Act (the 2009 Act) sets out a framework designed to reduce flood risk across Scotland over time. Local authorities, SEPA and Scottish Water have duties to work together to produce a national flood risk assessment, flood risk and hazard maps, Flood Risk Management (FRM) Strategies and Local FRM Plans. The legislation requires this process of risk assessment, mapping and planning to be repeated and updated at least every six years.
- 1.9 Although public authorities are expected to take a proactive role in managing and, where achievable, lowering overall flood risk, the primary responsibility for avoiding or managing flood risk still remains with land and property owners. The 2009 Act does not alter this. Individuals, businesses and communities must, therefore, play the central role in making themselves more resilient and reducing the impact of flooding.
- 1.10 On 19 May 2021, the Environment and Infrastructure Committee approved the Council's proposed actions for the second cycle of Flood Risk Management (FRM) Strategies and Local FRM Plans (Report No. 21/60 refers). The report included the outcome of the review of existing flood schemes. It also set out

proposals for new flood protection schemes and other actions intended to manage flood risk before those schemes are completed.

- 1.11 This included a range of general actions, common to all areas and actions specific to individual objective target areas required to tackle a particular source of potential flooding. Those actions can help to manage flood risk in the interim, whether or not a flood scheme is proposed for the area.
- 1.12 The general actions include maintenance work (including watercourse clearance and/or repair works), the maintenance of any existing flood schemes, awareness raising, flood forecasting, self-help (including individual property flood measures), land use planning and links with emergency planning.
- 1.13 The specific actions include flood schemes or works, flood studies, flood warning or actions to improve understanding of flooding (such as improvements to strategic flood maps).

Points iii to iv of the Motion: 11- 12 August Flooding Event - Post Flood Response Work & Community Engagement

- 1.14 Following the flooding of 11 and 12 August 2020, officers from the Council's flooding team were immediately deployed to investigate, initially undertaking door to door visits, engaging with affected residents and businesses and offering advice and support. This work was supported by our Customer Contact Centre, Health & Social Care Partnership and other agencies, including the Scottish Flood Forum who set up their response van in flood affected communities in the days that followed. The Housing Service also set up a dedicated team to ensure advice and support was provided to council and private tenants / owners. Temporary accommodation was provided to five households and practical assistance (such as the loan of heaters, priority access to crisis grants and dehumidifier) was given to over 20 households.
- 1.15 A general community bulletin and Frequently Asked Questions were quickly issued, and specific flood bulletins were also sent out to all of the main areas affected by the flooding. A dedicated web page(www.pkc.gov.uk/August2020flooding) and a generic e-mail address (flood@pkc.gov.uk) were set up to provide a single source of information and advice and to route all flood related enquiries.
- 1.16 Although the flood event lasted just a matter of hours, the impact was felt for much longer and the Council continued to receive a high volume of calls and e-mails from residents for some months. By the end of December 2020, the teams had logged and were still responding to over 650 enquiries.
- 1.17 Between 15 September 2020 and 12 October 2020, nine on-line community meetings were held for residents and businesses in five areas of Perth and Alyth, Kinross, Dunning and Forgandenny. The meetings were supported by a multi-agency group, including the Council's flooding team, the Roads Maintenance Partnership, the Scottish Flood Forum, Scottish Water, SEPA and the emergency services. The meetings involved a presentation and the

opportunity for questions. The group discussed the response to the flooding and provided advice on on-going and future action to manage flood risk in the areas affected, including flood recovery work, property and community flood resilience and forthcoming projects in the flood risk management plans. Approximately 180 members of the public and elected members attended. Meetings were recorded and can be viewed at: www.pkc.gov.uk/August2020flooding.

- 1.18 Council Officers undertook additional actions including:
- continued work with public agencies and local resilience groups to investigate and respond to the impact of the flooding, focusing on homes and businesses most affected
 - on the ground work in the most affected areas to respond to, and support, on-going emergency works.
 - clearance works on the Craigie Burn, the Alyth Burn and the Dunning Burn.
 - CCTV camera surveys of drainage systems and culverts
 - works to make safe a collapsed retaining wall on the Deich Burn in Bridge of Earn.
- 1.19 Looking forward, a national public consultation on the proposed second version of the FRM Strategies and Local FRM Plans commenced in December 2020 and the main information on the proposed actions will be added on 30 July 2021. The consultation will run until 30 October 2021.
- 1.20 The final FRM Strategies must be published by 22 December 2021 and the Local FRM Plans by 22 June 2022. Both will take account of the views expressed during the forthcoming public consultation.

The Council's response to the flooding as it happened

- 2.1 The Road Maintenance Partnership are responsible for providing the reactive response to severe weather events and maintaining and operating the Council's flood protection schemes. This involves: -
- maintaining an out of hours rota to respond to emergency requests
 - providing sandbags in response to, or in advance of, flooding
 - closing flood scheme gates in accordance with specific warnings
 - working collaboratively with other Category 1 responders

Advance warning

- 2.2 On the evening of 11 August 2020, prior to the event, a MET office yellow "be aware" warning was in place. These yellow warnings are numerous, only impacting in extremely rare occasions. The Council does not routinely undertake any special measures in response to a yellow warning, due to its anticipated low-level impact, generally covering a wide geographic area. On 11 August 2020, in line with other first responders, the Council took no special measures.

- 2.3 At 11pm on 11 August 2020, the yellow warning was upgraded to amber. Usually when an amber warning is issued, road maintenance partnership officers assess the location of the warning area, known flooding likelihood/issues and consider proactive placing of sandbags and increase staffing resources for the out of hours response. However, on this occasion, the amber warning was issued as the severe rainfall commenced, leaving no time or opportunity to prepare or plan.
- 2.4 No river flood warnings were in place, and as a result no action was initiated on the Perth Flood Protection Scheme, as required by established operational procedures.
- 2.5 An event timeline at Appendix A, details how flooding developed in the Craigie burn catchment area of Perth over this period. The Scottish Water combined sewerage system across the city was inundated and, as most of the Council's surface water gullies in the city run into this system, this resulted in the inundation of many roads.
- 2.6 Road gullies (drains) hold a very small quantity of water only, to allow solids to settle and prevent them entering and blocking the pipe system. The water collected in the gully discharges, principally, into the sewerage system in an urban environment. When this system is at capacity, the gully cannot drain away, leading to surface water ponding/flooding. There will be isolated gullies blocked at any point in time across the Council network, however, in an event such as this, locally blocked gullies would not impact significantly on any communities flooded.
- 2.7 When capacity returned to the system, gullies emptied with no widespread evidence of blockages, although solids will have settled in the gullies during the event and so added to the silt in the gully pot. An example of capacity returning to the system, and gullies emptying effectively, was evident in Feus Road, where the entire street drained within just over three hours.
- 2.8 Rural roads and those in towns and villages similarly became inundated with three significant road bridges and several culverts lost to the flood water. The areas affected most significantly in addition to Perth were Alyth, Dunning, Forgandenny, Kinross, Pitlochry Blairgowrie and Methven. Many homes were flooded, five schools had to be closed due to flood damage or water ingress and Perth Leisure Pool, Bells and 2 High St were seriously impacted.
- 2.9 Much of the flooding was caused by intense rainfall, which generated high volumes of surface water in urban areas, often beyond the capacity of the drainage systems. The high rainfall also generated a considerable response in some watercourses, with the Craigie Burn in Perth, the Alyth Burn, the South Queich in Kinross as well as other small watercourses being particularly affected. Flooding in some parts of Perth was also exacerbated by three of the flood gates around the South Inch flood storage area not being closed. One was as a result of human error (due to a training issue) and a lack of time to initiate the checking process which is usually followed during the gate closure procedure. The other two gates were

inundated by water in the short time it took staff to arrive rendering it unsafe to approach these gates. The requirement to close the gates was triggered by a surface water flood event rather than a river warning. This issue has now been addressed.

Point v of the Motion: Review of the Out of Hours Emergency Service

- 2.10 Customer contact and out of hours arrangements are provided by Aberdeen City Council (ACC). This arrangement has been in place for a number of years and Aberdeen also provide the service on behalf of Aberdeenshire Council, Highland Council and Moray Council. The service involves call handling between 5pm and 8:45am Monday to Friday and 24 hours over the weekend and Bank Holidays at an annual cost of circa £0.006m.
- 2.11 The Service involves the provision of three phone lines answered by customer contact advisors in Aberdeen who triage enquiries and refer them on to the Roads Maintenance Partnership (RMP). Although the service has worked well since its introduction in 2010, it has never had to deal with an event of the magnitude of 11 August 2020. In response to the emergency motion, an urgent review of the arrangements was undertaken to identify any service enhancements to ensure a more effective response to any future emergency events.
- 2.12 On the evening of 11 August 2020, the Aberdeen call centre had 5 members of staff answering calls. Under normal circumstances, this number of call handlers effectively manage all calls received for the four authorities. This is evidenced by monitoring information which demonstrates that all three Perth and Kinross lines are concurrently utilised less than 1% of the time. However, on the evening of the 11/12 August 2020, the call centre was unable to deal with the volume of calls from Perth and Kinross residents and whilst 219 call were answered, some 267 were unanswered. Some of these unanswered callers would have persevered and eventually got through.

The table below provides further information.

Date	Time	Answered	Unanswered calls
11-8-20	20.00 and 20.59	2	0
	21.00 and 21.59	0	0
	22.00 and 22.59	1	0
	23.00 and 23.59	1	0
12-8-20	00.00 and 00.59	1	0
	01.00 and 01.59	1	0
	02.00 and 02.59	38	134
	03.00 and 03.59	28	24
	04.00 and 04.59	43	9
	05.00 and 05.59	15	0
	06.00 and 06.59	26	7
	07.00 and 07.59	29	24
	08.00 to 08.45	34	69
	Totals	219	267

- 2.13 The volume of calls received during that evening had never been experienced in 20 years of the call centre being in operation. To have effectively handled the volume of calls received would have required significantly more (multiples of 10 call handlers) particularly during the peak time of 2am to 3am.
- 2.14 In discussion with colleagues at Aberdeen CC, officers have considered a number of options for responding to any potential future event. The following context is relevant when considering options for any future response:
- the Met Office only issued a yellow warning prior to the flooding event, with the status escalating to Amber from 11pm on 11 August 2020, effectively when the flooding event began.
 - there were 72 yellow warnings in 2 years prior to the event on 11 August 2020 and 4 amber warnings in the same period.
 - this was the only one occasion that the Out of Hours call handling arrangements were overwhelmed.
- 2.15 Furthermore, given the nature of the event, the timing of the amber warning and the lack of any opportunity for the Council to prepare, no additional contingency arrangements could have been initiated within the timescales.
- 2.16 A further challenge exists with the current IT arrangements, as the telephony network which links Perth & Kinross and Aberdeen does not allow calls to be redirected back to a call handler in Perth & Kinross, if they could not be answered in Aberdeen. Therefore, any contingency arrangements above those currently in place would require the Council to answer **all** out of hours calls during an emergency.
- 2.17 Given the highly unusual circumstances of the incident, the continued satisfactory arrangements on a normal operating basis and the level of resource required to be available in the event of a similar situation arising again, any enhancements need to be proportionate and reflect this context. Aberdeen CC have agreed to offer an enhanced service by increasing staffing capacity by up to three dedicated call handlers at peak times. It is proposed that this enhanced service is initiated and complemented with additional contingency arrangements within Perth & Kinross's own contact centre. On the evening of 27 July 2021, the Council received more than 8 hours' notice for the amber warning, allowing time to prepare in advance. As a result, the customer contact centre provided an extended service on the evening until 9.30pm, at which point the phone lines were transferred to ACC with enhanced call handler provision.

Point vi of the Motion: Policy and Level of Service for Winter

- 2.18 The emergency motion requested that officers include other weather events in future Policy and Level of Service for Winter reports. Officers have reviewed arrangements and incorporated other weather events into its arrangements and policy for winter service. This will become routine practice and will enable officers to report to provide a consolidated and more comprehensive overview to committee of all severe weather events that have occurred during the

previous year with an overview of issues and impacts, resources and any improvement actions for future years.

3. PROPOSALS

Point iii of the Motion: Interim Arrangements / Short, Medium & Long Term Actions

The review of the response to the flood event has enabled a detailed understanding of the sequence of events before, during and after the flooding on 11 and 12 August 2020. Whilst the unusual and unprecedented circumstances, along with the lack of adequate warning time, of the event limited officers' ability to plan and respond, a number of additional actions have been identified to enhance the Council's response to any future events.

- 3.1 The FRM Strategies and Local FRM Plans identify a wide range of structural and non-structural actions to manage flood risk.
- 3.2 As noted at 1.9, individuals, businesses and communities must play a central role in making themselves more resilient and reducing the impact of flooding. Community resilience and self-help, supported by awareness raising form a key role in flood risk management – as set out in the current and draft FRM Strategies and Local FRM Plans.
- 3.3 Flood protection schemes have already been implemented in a number of communities and more schemes are proposed. However, it is not possible to implement flood protection schemes in all areas that are at risk of flooding.
- 3.4 As noted at 1.8 - 1.13, the draft FRM Strategies and Local FRM Plans already include general and specific actions intended to manage flood risk. Those actions will help to manage flood risk in the medium (or interim) term, whether or not a flood scheme is proposed for an area.
- 3.5 The long-term actions have also been noted at 1.19 and are generally considered to be actions that require longer timescales to be implemented. These include flood studies (where further investigation of flood risk, and the potential means of managing it, is required which will recommend further action) and flood schemes (which involve a long process of development, statutory approval, design and construction). Again, these actions are already included in the draft FRM Strategies and Local FRM Plans.
- 3.6 The short, medium (or interim) and long-term actions are summarised in Appendix B (emergency motion point iv).
- 3.7 Further community bulletins will be issued to the communities noted, to provide an update on these actions and an opportunity to discuss them further if required.
- 3.8 As noted above, residents and businesses can engage with the national public consultation on the proposed second version of the FRM Strategies and Local FRM Plans which runs from 30 July until 30 October 2021.

3.9 It is proposed that arrangements are established whereby Aberdeen City Council call centre provide additional dedicated staff to answer calls during severe weather events. Such an arrangement will be based on the availability of staff, and at the request of PKC. It is therefore intended to introduce this arrangement in the event of an amber warning. On the basis of two amber warnings annually (historic data indicates this frequency), this will cost circa an additional £0.002m per annum funded from the road maintenance budget. It would, however, require an advance warning to be in place to enable call handlers to be sought.

4. CONCLUSION AND RECOMMENDATION

4.1 The Council did not receive any timeous warnings to indicate that a storm of the severity of that which occurred was anticipated. This impacted on the Council's ability to instigate precautions immediately prior to the event.

4.2 The Council was, however, quick to respond on the evening of the event, although given the timing and the severity and extent of the flooding the Council was limited in its ability to reduce its impact.

4.3 During the evening, except for the closure of the 3 flood gates, officers followed the Council policies and procedures. Follow up actions and engagement with communities was extensive and this, alongside the involvement of staff, has supported a comprehensive review of the Council's response before, during and after the event.

4.4 The review has enabled a number of improvements to be identified and introduced which will ensure an effective approach to mitigating and minimising the impacts of flooding and supporting those communities at greatest risk.

4.5 It is recommended that the Committee:

- (i) notes the steps taken in response to the Environment & Infrastructure Committee's emergency motion of 19 August 2020.
- (ii) approves the actions detailed in Section 3 and Appendix B of this report to further strengthen the Council's response to supporting communities at risk of, and affected by, flooding.

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1. IMPLICATIONS, ASSESSMENTS, CONSULTATION AND COMMUNICATION

Strategic Implications	Yes / None
Community Plan / Single Outcome Agreement	Yes
Corporate Plan	Yes
Resource Implications	
Financial	Yes
Workforce	None
Asset Management (land, property, IST)	None
Assessments	
Equality Impact Assessment	Yes
Strategic Environmental Assessment	Yes
Sustainability (community, economic, environmental)	Yes
Legal and Governance	Yes
Risk	Yes
Consultation	
Internal	Yes
External	Yes
Communication	
Communications Plan	Yes

1. Strategic Implications

Community Plan/Single Outcome Agreement

1.1 The proposals relate to the delivery of the Perth and Kinross Community Plan / Single Outcome Agreement in terms of the following priorities:

- (ii) Developing educated, responsible and informed citizens;
- (iii) Promoting a prosperous, inclusive and sustainable economy
- (iv) Supporting people to lead independent, healthy and active lives
- (v) Creating a safe and sustainable place for future generations

Corporate Plan

1.2 The proposals relate to the achievement of the following Priorities in the Council's Corporate Plan:

- (ii) Developing educated, responsible and informed citizens;
- (iii) Promoting a prosperous, inclusive and sustainable economy;
- (iv) Supporting people to lead independent, healthy and active lives; and
- (i) Creating a safe and sustainable place for future generations.

2. Resource Implications

Financial

- 2.1 This Scottish Government opened the Bellwin Scheme following the flooding of 11/12 August, the scheme is to assist with the cost of the emergency works. A claim of £1,114,249 was submitted, of which the first £743,021 of costs are to be met by the Council. To date grant funding received is £334,105 which is 90% of the difference, the remaining £37,123 will be received after the claim is audited.
- 2.2 It should be noted that not all of the actions identified in the second cycle of draft FRM Strategies and Local FRM Plans will be implemented during that cycle. The implementation arrangements for on-going actions have already been prioritised and set out in the current published Local FRM plans for 2016-2022. The Interim Reports published in 2019 provide a recent update on the progress of those actions. Any new potential measures will be subject to further development through the progression of flood studies or flood scheme proposals and the proposed implementation arrangements will not be finalised until the Council's Local FRM Plans are published in June 2022. As a result, there are no immediate resource implications arising directly from the recommendations in this report.
- 2.3 However, the flood risk management planning process will have on-going financial implications. The second cycle of Local FRM Plans to be published in June 2022 will include the implementation arrangements including the timetable for current and new actions to manage flood risk, who will be responsible for implementing them, as well as how they will be funded and coordinated by SEPA and the responsible authorities over the second six-year cycle from 2022-2028.
- 2.4 The 2009 Act requires the Scottish Government to have regard to the FRM Strategies and Local FRM Plans when allocating funds to SEPA and responsible authorities. The Scottish Government, CoSLA and SEPA agreed the distribution of capital funding to the actions identified nationally in the current FRM Strategies and Local FRM Plans. The following arrangements apply:
- (i) Only works and schemes that are prioritised in the FRM Strategies and Local FRM Plans are eligible for capital funding.
 - (ii) Flood protection schemes attract capital grant assistance of up to 80% of their estimated project cost at tender stage from the Scottish Government. Local authorities are required to fund the remainder of the cost of flood schemes.
 - (iii) The Scottish Government allocates capital funding to local authorities engaged in flood risk management across Scotland. 80% of this capital funding will continue to be allocated to flood protection schemes with the remaining 20% to other actions within the FRM Strategies, as detailed in the Local FRM Plans. This 20% is distributed to the 32 Scottish local authorities based on the number of properties at risk of flooding and the estimated annual average flood damages.

- 2.5 These arrangements are being reviewed by the Scottish Government, CoSLA and SEPA before the second cycle (from 2022 – 2028) commences.
- 2.6 The Council currently has four flood protection schemes that have been included in the national priority list for the first cycle from 2016-2022. Both the Scottish Government and the Council have made capital allocations for these schemes. The allocated grant is adjusted as flood scheme proposals are developed.
- 2.7 The Council submitted details of a further three flood protection schemes to SEPA in December 2019. SEPA will be assessing and prioritising all the actions across Scotland to be funded in the second cycle of FRM Strategies from 2022-2028. Any studies and investigations that did not arrive at an identified solution by December 2019 will not attract funding in the second cycle. This may result in certain communities being at an increased risk of flooding for longer.
- 2.8 Revenue funding will continue to be distributed in line with current arrangements.
- 2.9 The Council has a duty to have regard to the published FRM Strategies and local FRM plans and so the actions set out therein are statutory obligations. The actions included in the current strategies and plans have been set out assuming that funding remains at current levels. However, if funding should prove not to be available throughout the remainder of the first 6-year cycle or the subsequent cycle of the plans, the implementation of those actions is likely to be delayed.
- 2.10 Clearly the issue of funding support from central government will continue to have a significant bearing on when the Council will be able to deliver any actions to manage flood risk in the future. In the meantime, the actions set out in the Council's current local FRM plans have been prioritised but will only be implemented as available resources allow.

Workforce

- 2.11 There are no workforce implications arising directly from the recommendations in this report.

Asset Management (land, property, IT)

- 2.12 The proposals in this report have no IT implications.
- 2.13 The individual actions set out within the draft local FRM plans may have land and property implications however these will be dealt with on an individual project basis.

3. Assessments

Equality and Fairness Impact Assessment

- 3.1 Under the Equality Act 2010, the Council is required to eliminate discrimination, advance equality of opportunity, and foster good relations between equality groups. Carrying out Equality Impact Assessments for plans and policies allows the Council to demonstrate that it is meeting these duties. The Equality Impact Assessment undertaken in relation to this report can be viewed clicking [here](#).
- 3.2 The function, policy, procedure or strategy presented in this report was previously considered under the Corporate Equalities Impact Assessment process (EqIA) with the following outcome.
- 3.3 Following an assessment using the Integrated Appraisal Toolkit, it was determined that the proposal be assessed as **relevant** and the following positive outcomes expected following implementation:

- (i) Assessed as **relevant** and actions taken to reduce or remove the following negative impacts:

The effects and aftermath of flooding could have a greater impact on mobility impaired, sight impaired, blind people or disabled people, on children and the elderly and infirm, and on pregnant women or nursing mothers, in relation to adverse psychological, physical and health impacts. The selected actions to reduce flood risk described in this report will reduce or remove these impacts.

- (ii) Assessed as **relevant** and the following positive outcomes expected following implementation:

- The selected actions will have the same positive impact for all equality groups as the reduction in flood risk to communities will provide benefits for all (improved safety, health & wellbeing through avoidance of flood impacts and damages) in the long-term.
- Providing the opportunity for all equality groups to comment on all aspects of flood risk and the various potential measures to reduce that risk within a specific area will allow particular concerns to be raised and incorporated within the final FRM Plans.

Strategic Environmental Assessment

- 3.4 The Environmental Assessment (Scotland) Act 2005 places a duty on the Council to identify and assess the environmental consequences of its proposals.

- 3.5 There are likely to be significant environmental effects associated with the Tay Local FRM Plan and the other three Local FRM Plans that the Council will contribute to. As a consequence, an environmental assessment is necessary. SEPA have commenced an environmental assessment for their FRM Strategies and their scoping report has already been completed. Following a review of this assessment, it has been confirmed that this will cover the Local FRM Plans and that no further assessment is likely to be required at this time.
- 3.6 This remained the case for the existing published Local FRM Plans (screening reports previously submitted to the SEA Gateway confirmed this). This position will be kept under review as the Local FRM Plans are developed.

Sustainability

- 3.7 Under the provisions of the Local Government in Scotland Act 2003 the Council has to discharge its duties in a way which contributes to the achievement of sustainable development. Under the Climate Change (Scotland) Act 2009 the Council also has a duty relating to climate change and, in exercising its functions must act:
- in the way best calculated to delivery of the Act's emissions reduction targets;
 - in the way best calculated to deliver any statutory adaptation programmes; and
 - in a way that it considers most sustainable.
- 3.8 Following an assessment using the Integrated Appraisal Toolkit, it has been determined that the proposal is likely to contribute positively to the following corporate sustainable development principles:

Climate Change

- Efficient use of resources now and in the future in the built environment and service provision (e.g. energy efficiency, land, water resources, flood defence, waste minimisation) (*Principle 2*)
- Mitigation and adaptation to manage the impact of climate change & reduce the production of greenhouse gases (*Principle 3*)

Justification:

- The implementation of the actions is aimed at mitigating the effects of increased flood risk brought about by climate change.

Fair and Sustainable Communities

- Creating a sense of place (e.g. a place with a positive 'feeling' for people, and local distinctiveness) (*Principle 22*)

Justification:

- The proposed actions are intended to reduce the flood risk to communities and will be subject to public consultation.

Equality and Human Rights

- Refer to Item 3.3 (above).

3.9 Following an assessment using the Integrated Appraisal Toolkit, it has been determined that the proposal is likely to contribute negatively to the following corporate sustainable development principles:

- **Consumption and Production**
Efficient use of resources now and in the future in the built environment and service provision (e.g. energy efficiency, land, water resources, flood defence, waste minimisation) (*Principle 2*)
Mitigation and adaptation to manage the impact of climate change & reduce the production of greenhouse gases (*Principle 3*)

Justification:

- The implementation of actions, e.g. new flood defences, may require a short-term increase in energy consumption during construction, but a future reduction due to reduced flood risk.

Mitigation:

- The efficient use of resources is to be considered on an individual project basis.

3.10 However, under the 2009 Act, the Council has a duty to manage flood risk in a sustainable way and to act in the best way calculated to contribute to the achievement of sustainable development. The measures that will be identified in the Council's future Local FRM Plans will comply with this requirement.

Legal and Governance

3.11 The Head of Legal and Governance has been consulted on this report.

3.12 The legal basis for the proposals set out in this report is the Flood Risk Management (Scotland) Act 2009.

Risk

3.13 The risks associated with any actions to manage flooding will be identified and managed through individual projects.

4. Consultation

Internal

- 4.1 The Head of Legal and Governance and the Head of Finance have been consulted in the preparation of this report.

External

- 4.2 The proposed format of the web based public consultation and the Citizen Space platform together with the proposed FRM actions have been developed and agreed in principle by SEPA, Scottish Water and the relevant local authorities.
- 4.3 Consultation will be carried out with relevant external stakeholders on any individual proposals.

5. Communication

- 5.1 The key outputs described in this report will be subject to phased public consultation between December 2020 and October 2021. This will be a joint web-based consultation using the Citizen Space platform.
- 5.2 Communication with relevant external stakeholders will take place on any individual actions proposed to reduce flood risk in the future.

2. BACKGROUND PAPERS

- 2.1 The following background papers, as defined by Section 50D of the Local Government (Scotland) Act 1973 (and not containing confidential or exempt information) were relied on to a material extent in the preparation of the above report;
- PKC – Environment Committee – 27 January 2010, Flood Risk Management (Scotland) Act 2009 (Report No. 10/51)
 - PKC – Environment Committee – 20 November 2013, Progress Report Flood Risk Management (Scotland) Act 2009 (Report No 13/544)
 - PKC – Environment Committee – 12 November 2014, The Flood Risk Management (Scotland) Act 2009, Short List of Potential Measures to Manage Flood Risk (Report No 14/483)
 - PKC – Environment Committee – 21 January 2015, The Flood Risk Management (Scotland) Act 2009, Public Consultation Arrangements (Report No. 15/16)
 - PKC – Environment Committee – 9 September 2015, The Flood Risk Management (Scotland) Act 2009, Selected Actions and Prioritisation (Report No 15/359)
 - PKC – Environment Committee – 1 June 2016, The Flood Risk Management (Scotland) Act 2009, Publication of Local Flood Risk Management Plans (Report No 16/241)

- PKC – Environment and Infrastructure Committee – 23 January 2019, The Flood Risk Management (Scotland) Act 2009 Publication of Interim Report (Report No 19/16)
- PKC – Environment and Infrastructure Committee – 19 May 2021, The Flood Risk Management (Scotland) Act 2009 Second Cycle of Flood Risk Management Plans (Report No 21/60)

3. APPENDICES

- 3.1 Appendix A – Event timeline
Appendix B - Summary of Short, Medium (or Interim) and Long-Term Actions