



Surface Water Management Plan

Elgin, Forres, Buckie, Rothes and Keith

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Executive summary

This document comprises the Surface Water Management Plan (SWMP) for the administrative area covered by The Moray Council. The Moray SWMP outlines the preferred surface water management strategy for the local authority area. It includes consideration of flooding from sewers, drains, runoff from land, small watercourses and ditches that occurs as a result of heavy rainfall. The SWMP has been prepared via a partnership between The Moray Council and Scottish Water to meet the requirements of the *Flood Risk Management (Scotland) Act 2009*. The Moray SWMP covers the 10 Potentially Vulnerable Areas (PVAs) identified by SEPA within the *Findhorn, Nairn and Speyside Characterisation Report* (SEPA, 2014) and the *North East Characterisation Report* (SEPA, 2014) covering the Moray administrative area:

- Burghead to Lossiemouth (Findhorn, Nairn and Speyside PVA 05/01)
- Spynie (Findhorn, Nairn and Speyside PVA 05/02)
- Lhanbryde (Findhorn, Nairn and Speyside PVA 05/03)
- Spey Bay (Findhorn, Nairn and Speyside PVA 05/04)
- Elgin (Findhorn, Nairn and Speyside PVA 05/05)
- Forres (Findhorn, Nairn and Speyside PVA 05/06)
- River Findhorn (Findhorn, Nairn and Speyside PVA 05/07)
- Rothes and Aberlour (Findhorn, Nairn and Speyside PVA 05/09)
- Buckie and Portgordon (North East PVA 06/01)
- Newmill (North East PVA 06/06)

The SWMP includes an Action Plan for the implementation of sustainable actions derived via a six-phase approach as recommended within the published guidance on the preparation of SWMPs (SEPA, Scottish Water, Scottish Government, 2013):

- Phase 1 - Preparation;
- Phase 2 - Assessment of flood risk;
- Phase 3 - Setting objectives;
- Phase 4 - Selection & appraisal of actions to manage flood risk;
- Phase 5 - Prioritising, funding and implementing actions; and
- Phase 6 - Review.

The first phase of the plan's development (preparation) is presented in Section 3 and concerns the collection of relevant information relating to the management of surface water flooding in Moray. It also defines the roles for organisations that have been involved in the preparation of the Moray SWMP.

In Section 4 the second phase of the SWMP process, comprising a baseline assessment of flood risk prior to commencing the development of potential surface water management options, is detailed. As required by the *Flood Risk Management (Scotland) Act 2009* this includes a review of the available surface water flood maps and baseline damage assessment data

supplied by SEPA to the Council. This review identified that in general the surface water flood maps and damage assessment are representative of the surface water flooding conditions within Moray subject to a number of provisos. However, surface water flooding in a number of locations was identified as misrepresentative and these locations have therefore been discounted in this study. In Elgin additional pluvial modelling was undertaken as initially there was no economic justification to invest in surface water management schemes. A refined damages assessment produced improved benefit cost ratios of a number of surface water management options.

Phase 3 of the plan concerns the setting of objectives for the SWMP and is detailed in Section 5. The SWMP presents 12 surface water management objectives which are consistent with the objectives set for the management of surface water within the Findhorn, Nairn and Speyside Local Plan District and the North East Local Plan District. The objectives use the Avoid-Protect-Prepare philosophy used by SEPA when setting objectives for Local Plan Districts. The objectives have been defined to be specific, measurable, attainable, realistic and time bound. A summary of the objectives set for the Moray SWMP is presented in Table 1.

Table 1: Overview of the updated objectives for the Moray SWMP

Area Description	Objective type	Source	Objective description
Elgin	Avoid	Surface Water	Avoid an overall increase in flood risk
Roths and Aberlour	Avoid	Surface Water	Avoid an overall increase in flood risk
Buckie	Avoid	Surface Water	Avoid an overall increase in flood risk
Keith	Avoid	Surface Water	Avoid an overall increase in flood risk
Forres	Avoid	Surface Water	Avoid an overall increase in flood risk
Elgin	Protect	Surface Water	Reduce residential and commercial surface water flood damages
Roths and Aberlour	Protect	Surface Water	Reduce residential and commercial surface water flood damages
Buckie	Protect	Surface Water	Reduce residential and commercial surface water flood damages
Keith	Protect	Surface Water	Reduce residential and commercial surface water flood damages
Forres	Protect	Surface Water	Reduce residential and commercial surface water flood damages
Moray	Prepare	Surface Water	Reduce the disruption caused by surface water flooding by raising awareness of the risk of flooding
Moray	Avoid	Surface Water	Improve the provision of maintenance to surface water management assets

Section 6 of the SWMP covers Phase 4 of the SWMP process and details the option appraisal for the management of surface water flooding within the SWMP area. Following the principles of the SWMP guidance, the option appraisal process has been undertaken at surface water flooding “hotspots” scale. In total 25 hotspots have been considered in the study with each hotspot representing a collection of receptors which flood via a similar mechanism and where flooding might reasonably be addressed in a consistent manner. The multi-stage option appraisal process has been undertaken following the SWMP guidance by screening the long list of potential options to form a short list of potential options. The long list was screened using the judgement of the SWMP Working Group based on:

- Is it likely to be technically feasible?
- Is it likely to be economic?
- Is there anything to indicate that it would not be legal to do?

The long list of potential actions comprised of the following activity types:

- Manage flooding using non-structural actions;

- Manage flooding at source by reducing runoff;
- Manage flooding by storing or conveying flood water on the surface;
- Manage flooding by storing or conveying flood water below ground; and
- Undertake further study to gain a better understanding of flood risk.

On completion of the screening a more detailed appraisal of the short list of potential options was then undertaken to identify a preferred potential surface water management option for each hotspot. The appraisal considered the economic benefits and other significant impacts (non-economic benefits) of each of the options. It should be noted that this is a high-level appraisal of options and significant refinement is required for all options prior to implementation. This may result in the currently identified preferred option being found to be unviable. On this basis all options are described as 'potential' options. It should be noted that the options target a reduction in flood risk and no options eliminate the potential for flood risk.

Phase 5 of the SWMP is presented in Section 7 and supports the implementation of actions via the development of a plan detailing the funding, ownership, and programme of the preferred potential options. This Implementation Action plan will be used by the Lead Local Authority (LLA), which is The Moray Council for the Findhorn, Nairn and Speyside Local Plan District (LPD05) and Aberdeenshire Council for the North East Local Plan District (LPD06), to define the activities in Moray for the management of surface water within the two separate Local Flood Risk Management Plans (LFRMP). Table 2 below summarises the proposed implementation plan.

Table 2: Summary of the implementation priority for the preferred potential options which form the SWMP Action Plan

Priority	Hotspot	Location	Description of preferred potential option	Status	Timing
1	All of Moray	Moray	Council to maintain SuDS strategy document, updating annually. Target bringing into ownership of public body. Council, SEPA and Scottish Water to work together to enforce using available powers	Potential	2021
2	Forres	Forres	Undertake Drainage Area Study with focus on surface water	Confirmed	2021
3	All of Moray	Moray	Council to develop targeted strategy for the more strategic use of existing road drainage maintenance resources	Potential	2021
4	ELHS01	Borough Briggs, Elgin	Interception trench to North East of Lady Hill	Potential	Possibly not this cycle
5	ELHS02	Station Road, Elgin	Overland flow path from Station Road south towards railway line	Potential	Possibly not this cycle
6	ELHS05	New Elgin Road / Linkwood Road, Elgin	Overland flow to a basin situated in playing field to the west of A941	Potential	Possibly not this cycle
7	ELHS60	Alexandra Road, Elgin	Construct overland flow path to existing pond in Cooper park	Potential	Possibly not this cycle
8	ELHS09	Morrison Road, Elgin	Overland flow to a basin situated in open ground to the west of Brodie Drive	Potential	Possibly not this cycle
9	RHS13	New Street South, Rothes	Reprofile the roads and footways to construct overland flow paths that drain New Street south Glennies Lane and Seafeld Lane towards the River Spey	Potential	Possibly not this cycle
10	ELHS08	High Street, Elgin	Reprofile High Street in Elgin to provide flood storage and safe flow pathways away from buildings	Potential	Possibly not this cycle
11	BHS18	Sutherland Crescent, Buckie	Construct pumped non-return valve (PNRV) on Sutherland Crescent to prevent backflows and allow curtilage flows to drain away	Potential	Possibly not this cycle

Priority	Hotspot	Location	Description of preferred potential option	Status	Timing
12	RHS12	New Street North, Rothes	Construct a separate surface water network on New Street draining north from Glennies Lane and Seafield Lane	Potential	Possibly not this cycle
13	BHS17	Rathburn Road, Buckie	Construct a CSO chamber in the Shipbuilding Yard to the north of Rathburn Road with outfall non-return valve and overland flow paths towards Burn of Rathven	Potential	Possibly not this cycle

Finally, the SWMP review process (Phase 6) is presented in Section 8. This outlines how the Moray SWMP will be reviewed and updated on a 6-year cycle with the first review taking place in 2021.